



PLAN FOR UTILIZING AND IMPROVING DATA TO SUPPORT THE NATIONAL DRUG CONTROL STRATEGY

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List of Drug Data Interagency Working Group Participating Agencies

Department of Defense:

DHA	Defense Health Agency
DIA	Defense Intelligence Agency
DSCA	Defense Security Cooperation Agency
OUSD(P)	Office of the Under Secretary of Defense for Policy

Department of Education

Department of Health and Human Services (HHS):

ASPE	Office of the Assistant Secretary for Planning and Evaluation
CDC/NCHS	National Center for Health Statistics (center under the Centers for Disease Control and Prevention)
CDC/NCIPC	National Center for Injury Prevention and Control (center under the Centers for Disease Control and Prevention)
CDC/NCHHSTP	National Center for HIV, Viral Hepatitis, STD, and TB Prevention (center under the Centers for Disease Control and Prevention)
FDA	Food and Drug Administration
NIAAA	National Institute on Alcohol Abuse and Alcoholism (institute under the National Institutes of Health)
NIDA	National Institute on Drug Abuse (institute under the National Institutes of Health)
SAMHSA	Substance Abuse and Mental Health Services Administration

Department of Homeland Security:

CBP	U.S. Customs and Border Protection
ICE/HSI	U.S. Immigration and Customs Enforcement Homeland Security Investigations
USCG	United States Coast Guard

Department of Justice:

BJS	Bureau of Justice Statistics (bureau under the Office of Justice Programs)
BOP	Federal Bureau of Prisons
DEA	Drug Enforcement Administration
NIJ	National Institute of Justice (institute under the Office of Justice Programs)



Department of State

INL Bureau of International Narcotics and Law Enforcement Affairs

Department of Transportation:

NHTSA National Highway Traffic Safety Administration

Department of Veterans Affairs:

VHA Veterans Health Administration

Executive Office of the President:

ONDCP Office of National Drug Control Policy

U.S. Postal Service:

USPIS United States Postal Inspection Service



Introduction

This report titled, “Plan for Utilizing and Improving Data to Support the National Drug Control Strategy,” hereafter referred to as “Drug Data Plan,” presents a comprehensive plan to develop and utilize the necessary data to inform implementation and evaluation of the Biden-Harris Administration’s 2022 National Drug Control Strategy. The SUPPORT Act of 2018¹ required ONDCP to issue a systematic plan for increasing data collection to enable real time surveillance of drug control threats, developing analysis and monitoring capabilities, and identifying and addressing policy questions related to the National Drug Control Strategy and Program. The statute requires the following key elements that are addressed (for statutory language, please see Appendix B):

- [Policy-relevant questions](#)
- [Data to be collected, used, or acquired](#)
- [Methods and analytical approaches](#)
- [Challenges to developing evidence to support policymaking](#)
- [Steps to be taken to implement the plan.](#)

This Drug Data Plan incorporates input from federal agencies engaged in drug-relevant activities (please see detailed Appendix D), since much of the existing data collection and analytical activities related to the National Drug Control Strategy and Program occur within these organizational entities. Each of these five required elements are described below.

¹ 21 U.S.C. § 1705(c)(1)(M), National Drug Control Strategy.



Developing Policy-Relevant Questions

This Drug Data Plan presents a series of policy-relevant questions and topical areas that can be informed by reliable and valid data, and that are flexible and timely enough to accommodate the policy needs of an ever-changing national landscape; these policy relevant questions were identified by federal Drug Data Interagency Working Group (IWG) member agencies, and a summary of major themes is presented here. For some topical areas, especially the broad-ranging ones such as treatment and recovery, broad constructs are outlined and further work is needed to better understand these topics. In other topical areas which are more narrowly focused, such as drug overdose, some questions are noted, but are meant to be illustrative, rather than comprehensive or exhaustive.

Agency inputs for the Drug Data Plan were solicited in Winter and Spring of 2022 and discussed in meetings of the reconstituted Drug Data IWG. In March 2022, a more structured request to help address required elements of the Drug Data Plan, *as stipulated in the SUPPORT Act*, was sent to Drug Data IWG agencies. Submission guidelines were provided, and individual agency submissions were compiled, which became the basis of further discussion at the Summer Drug Data IWG meeting and circulated among member agencies for additional feedback.

A listing of policy relevant questions for each agency can be found in Appendix D. This section summarizes the content themes raised by Drug Data IWG member agencies. These topical areas include: *drug overdose; treatment and recovery; drug supply and emerging threats; the epidemiology of substance use and substance use disorder (SUD), including primary prevention; polysubstance use and comorbidity; harm reduction; the overall response to the opioid epidemic; and correlates of drug policy.* Each of these is described in turn below.

Drug Overdose

One of the central goals of the National Drug Control Strategy is to reduce drug overdoses. Drug overdose incidents can be fatal or nonfatal, and data regarding these events come from a variety of sources. It is important that agencies are able to harness and effectively triangulate existing data systems, none of which are complete in and of themselves, so that drug overdose information can be fully utilized to inform policy.

Overdose fatalities are tracked nationally from death certificates from the *National Vital Statistics System (NVSS)* and the *State Unintentional Drug Overdose Reporting System (SUDORS)*. NVSS includes death certificates from all states, and SUDORS, which includes 47 states and D.C., and in addition to death certificates, also captures data from medical examiner/coroner reports, including full-postmortem toxicology results and risk factors associated with the overdose death.

There is currently no single data source for comprehensively capturing nonfatal overdose – a gap that hinders state and federal government’s ability to efficiently allocate and distribute lifesaving treatment and harm reduction resources to communities in greatest need. Without such data, governments must gain insights from a variety of fatal and nonfatal data sources to create a holistic view of drug overdose throughout the country. In the pre-hospital care setting, efforts are under way to harness reporting from emergency medical services (EMS) using the National EMS Information System (NEMSIS). EMS data, which includes geolocation information, are also



used by the National Drug Early Warning System (NDEWS). In the hospital care setting, emergency departments (EDs) serve as another key source of drug overdose data and are included in the Drug Overdose Surveillance and Epidemiology (DOSE) System, the Healthcare Cost and Utilization Project (HCUP), and the newly reestablished Drug Abuse Warning Network (DAWN). CDC/NCIPC is also investing in innovative data systems to better understand overdoses treated in EDs including the clinical presentation, medical outcomes, patient demographic information, and information about treatment and overdose prevention. NCHS is developing an opioid overdose dashboard using ED discharge data with the National Hospital Care Survey (discussed further in the Record Linkage section). Additionally, VHA has recently implemented mandatory reporting of nonfatal overdose in their health record, along with other health encounters. This, however, will only include events reported to VHA health care providers.

While work is ongoing to improve and utilize each of these data sources, further information is needed about nonfatal overdoses that were treated with naloxone by non-medical bystanders or community members. Some of these data are routinely collected by community programs and harm reduction organizations that distribute and replenish naloxone supplies. However, federal support to harmonize and aggregate this information could further advance data collection in this area. Taken together, these data sources can serve to function as an information national mosaic of nonfatal overdose.

Additional policy questions identified include:

- How are federal law enforcement and public health agencies, in addition to state, local, Tribal, and territorial partners responding to overdose hotspots?
- What is the geographic and demographic distribution of nonfatal overdoses, and what drugs are involved?
- How can the collection of real-world, real-time data on overdose reversals and patient outcomes be improved?
- How do overdose trends compare across multiple data sources, including ED visits and EMS encounters?
- What are the attitudes, beliefs, or knowledge gaps that serve as barriers and facilitators to the implementation of strategies to address opioid and other drug overdoses?
- What is the effectiveness of new or innovative prevention and intervention approaches for overdose that have not been evaluated, including those designed to address populations at greatest risk?
- What underlying individual factors or life experiences are associated with drug overdoses, including race, social determinants of health, trauma, and adverse childhood experiences? How do these factors contribute to health disparities, and what do such data suggest regarding the most promising strategies to build health equity?



Treatment and Recovery

Improving policies related to the treatment of SUD requires having information about the nature and extent of treatment needs, barriers to treatment, treatment delivery processes, consequences of obtaining or not obtaining treatment, referrals and linkages to care, and the recovery process. Treatment and recovery exist on a continuum of care, and successful interventions include ancillary and support services to assist the patient with concurrent needs related to social determinants of health, such as housing, transportation, and employment. The Drug Data IWG identified several potential policy relevant research questions that could drive data collection and analytic efforts. These include:

- What is the extent of SUD treatment and related services, including the availability, access, initiation, retention, and barriers in the United States? SUD treatment should also be assessed among under-resourced, vulnerable groups and populations who may have challenges engaging with traditional healthcare. Answering this question requires data on:
 - Treatment needs for SUD and service delivery within various sub-populations, including racial, ethnic, sexual, gender, and religious minorities, older adults, those in the criminal justice system, pregnant and post-partum people, residents of rural areas, persons experiencing homelessness, persons with co-occurring mental illness and SUDs, persons who inject drugs, Medicaid beneficiaries, and opioid-exposed infants and children.
 - Best practices and rates of success for medications for SUD including both initiation and retention.
 - Assessment of ambulatory and mobile treatment approaches.
 - Evaluation of integrating harm reduction services in the care continuum.
 - Barriers to initiation and retention in treatment.
 - Effectiveness of programs for expanding access to treatment.
- What is the feasibility and efficacy of SUD treatment and services in various settings, including among criminal justice and active military or veteran populations, skilled nursing facilities, community health centers, those experiencing homelessness, and those with co-occurring mental illness and SUDs, as well as patient outcomes along the care continuum? Answering this question requires data on:
 - Patient outcomes across the care continuum.
 - Availability of medications for SUD, particularly for those in carceral settings, people experiencing homelessness and through reentry into the community, and those with co-occurring mental illness and SUDs.
 - Impacts of transitions in the treatment continuum – including for those incarcerated and returning to the community, for those transitioning from active military service to veteran status, and for those experiencing homelessness.
 - Continuity of care throughout all stages of criminal justice system involvement, including arrest, pre-trial release, jail, prison, probation, parole, and supervised release, and the impact on public safety and public health.
 - Integration of peer support services in recovery and treatment settings.
 - Ambulatory and mobile implementation of care continuum services.



- What outcomes are associated with lack of treatment among various populations (e.g., people engaged with child welfare services, the justice system, emergency medical services (EMS), and law enforcement)? Answering this question requires data on:
 - Behavioral health encounters, such as those with EMS.
 - Benefits of follow-up care after nonfatal drug overdoses and costs associated with the loss of life when care is not provided for people who overdose.
 - Social determinants of health, including housing instability, employment, health care access, and education access.
- How does treatment stigma (negative perceptions, beliefs, and attitudes) from both providers of services and recipients impact the delivery of care, engagement, and retention?
- What is the effectiveness of different recovery support services, including active recovery communities, peer recovery support services, recovery residences, education-based recovery support services, continuing care models, services that assist with family reunification upon stabilization, and other support services to meet the needs of specific minority health and health disparity populations? This might include understanding the role of barriers to initiation and retention in care, including reimbursement rates, implicit bias, social, and/or structural determinants of health.
- How does workforce development, continuing education, SUD-specific training, equitable behavioral health employment (e.g., salary, benefits, retention), and behavioral health workforce adherence to evidence-based practices contribute to the quality of treatment delivery?
- Do current SUD care quality measures sufficiently monitor progress in outcomes associated with treatment and recovery support services?

Drug Supply and Emerging Threats

The drug supply is constantly evolving with the development of novel synthetic drugs, as well as the emergence of new adulterants, bulking agents, and contaminants being added to the existing illicit drug supply. Therefore, another area of policy-relevant questions where drug data is needed focuses on better understanding the drug supply and potential emerging threats. Detection of specific substances present in the drug supply and monitoring trends in the amount or volume of specific drugs, their price, purity, and form, as well as specific geographic variations are critical to informing drug policies and programs, including but not limited to targeting law enforcement drug seizure activities and the allocation of lifesaving treatment and harm reduction resources. Below provides a summary of potential policy relevant questions regarding the drug supply and emerging threats:

- What policy-relevant insights do law enforcement actions, such as drug seizures, provide about the availability of specific drugs and their risks to public health?
 - For example, the VA is currently working with HIDTA and DOD to combine drug seizure data with VHA data from urine drug screenings, diagnoses, SUD treatment, and overdoses to try to better characterize illicit drug availability and utilization at the community level. While these models are narrowly focused on VHA patient populations, their results may provide insights that can be helpful for informing public health efforts.



- How do federal law enforcement agencies collaborate and share information with public health agencies? What is the purpose of this information sharing and how does coordination between these entities improve health outcomes?
 - Partnerships, such as HIDTA’s Overdose Response Strategy,² can be useful in sharing information across data sources and collaborating on solutions.
- Which specific drugs are found in combination throughout the supply chain, and at what point in the supply chain are drugs being combined (e.g., by manufacturers, dealers, or drug users)?
 - Additional surveillance data is needed regarding the specific substances found in combination with synthetic opioids, such as illicitly manufactured fentanyl, xylazine, methamphetamine, and other drugs.

In addition to the drug supply, generally, it is necessary to stay ahead of the ever-changing supply by identifying emerging drugs being used or new patterns of use for existing drugs.

Specific sub-questions noted by drug control agencies include:

- What is the availability and use of counterfeit pharmaceutical products and their subsequent consequences?
- How can data on drug use patterns be deployed to help law enforcement and public health agencies better identify and respond to emerging drug threats?
- Are people who use highly potent drugs, such as fentanyl, seeking out these drugs or being exposed unintentionally?
- What role do illicit finance networks play in the proliferation and distribution of emerging drug threats?

Studying the drug supply is a complex and fast-moving undertaking. Of necessity, it will require deploying innovative data collection methods beyond counting drug seizures or asking survey questions. Additional data collection tools can include:

- Wastewater-based epidemiology (also discussed in the Methods and Analytical Approaches section).
- Laboratory testing of drug seizure samples – DEA’s National Forensic Laboratory Information System (NFLIS) is the major existing data source for understanding the drug supply at this time.
- Testing or re-testing of biological samples from sub-populations at high risk of drug use or forensic relevance.
 - For example, pilot studies conducted by the University of Maryland on the Community Early Warning System (CDEWS)³ and Emergency Department Drug Surveillance (EDDS)⁴ have demonstrated that re-testing urine samples for a wider

² Overdose Response Strategy. Available at <https://www.hidtaprogram.org/ors.php>. Accessed on August 1, 2022.

³ CDEWS (Community Drug Early Warning System). Available at <https://cesar.umd.edu/landing/CDEWS>. Accessed on August 1, 2022.

⁴ Schwartz BE, Dezman Z, Billing AS, Heine K, et al. 2022. Emergency Department Drug Surveillance (EDDS) hospital’s urinalysis results compared with expanded re-testing by an independent laboratory, a pilot study. *Drug and Alcohol Dependence*. Volume 230, 1 January 2022. Available at <https://doi.org/10.1016/j.drugalcdep.2021.109195>. Accessed on August 1, 2022.



panel of drugs is an inexpensive and anonymous way to identify the presence of substances that are missed in routine testing.

- There is a need for standardization of urine drug screening labs and reporting based on the various standard testing panels, not only improving clinical decision support in medical records, but also for turning health care system screening for drug use into usable surveillance on local drug use patterns.
- Community drug checking services,⁵ which provide independent anonymous laboratory analysis to identify specific substances in drug samples, can provide important local information. As these services become more widespread, they can provide a more comprehensive national picture of what people believe they are buying and using, and what is actually in the drug supply. Federal coordination and support of drug checking services could potentially develop this into a valuable data resource.

Epidemiology of Substance Use and Substance Use Disorder, Including Primary Prevention

Information on initiation of substance use and the progression to a substance use disorder (SUD) is important for shaping drug policy, and this was an additional policy-relevant topic area identified by Drug Data IWG member agencies.

Youth are a major sub-population of interest in the area of drug use prevention, hereafter referred to as primary prevention.⁶ Primary prevention focuses on risk and protective factors influencing non-use, initiation, continuation, and discontinuation of drug use. At the community level, risk and protective factors also need to be examined to improve public health response.

Progression to SUD moves through a number of intermediate steps and there is a need to determine ways to identify and support those that are in the early stages of SUD before they cascade to severe SUD. The notion of pre-addiction, analogous to pre-diabetes, has been discussed as a topic that requires further examination.⁷

Specific subtopics noted include:

- What is the role of prescription medications on drug use trajectories and related harms?
- What other possible settings can assist in prevention efforts, including at school or within other faith-based or community organizations?
- What is the effectiveness of new or innovative approaches to prevent youth initiation of substance misuse, including those that engage multiple sectors within the community?
- What is the effectiveness of new or innovative prevention approaches for substance misuse that have not been evaluated, including those designed to address populations at greatest risk?
- Do racial, ethnic, and sexual or gender identity disparities exist in terms of substance use and SUD, and what factors may contribute to these disparities?

⁵ Examples of this are UNC Street Drug Analysis Lab. Available at <https://www.streetsafe.supply>. Accessed on July 31, 2022 and Erowid’s anonymous drug analysis program. Available at <https://www.drugsdata.org/>. Accessed on July 31, 2022.

⁶ Primary prevention is distinct from other, more specific efforts also labeled “prevention”, such as overdose prevention or suicide prevention.

⁷ McLellan AT, Koob GF, Volkow ND. 2022. Preaddiction – A Missing Concept for Treating Substance Use Disorders. *JAMA Psychiatry*. Published online July 6, 2022. doi:10.1001/jamapsychiatry.2022.1652.



- How do federal law enforcement agencies address drug prevention (or demand reduction) and what is the effectiveness of these efforts and the impact on public safety and the burden on law enforcement?
- How does route of administration influence individuals' decision to initiate drug use, their perceived risk, and subsequent health outcomes?

Polysubstance Use and Comorbidity

Polysubstance use and comorbidity are related, but somewhat distinct areas, and were jointly raised as a fifth area of data needs to inform policy formulation. On polysubstance use, lack of knowledge about patterns of the co-occurring or sequential use of more than one drug is a major gap in existing research to inform policy.⁸ The usual tendency is to examine each specific drug used without explicit recognition of concurrent or sometimes interactive effects of other substances. Specific policy-relevant questions on polysubstance use include:

- Is the co-administration of synthetic opioids and other drugs, including stimulants, intentional or unintentional?
- What is the prevalence of co-occurring heavy alcohol use and illicit drug use?
- How often is there co-involvement of multiple drugs in nonfatal⁹ and fatal¹⁰ overdose, both in general and by specific drugs (such as xylazine¹¹ or gabapentin¹²)?
- How often is polysubstance use identified in workplace testing programs and which combinations of substances are being identified?

On comorbidity, there is a need to address conditions that tend to co-occur together. Specific policy relevant questions identified include:

- What is the prevalence of co-occurring substance use and mental illness, specifically among youth, people involved in the criminal justice system, those experiencing homelessness, and active military or veterans?
- What is the relationship between suicide or attempted suicide and drug overdose?
- What is the relationship between chronic pain conditions and substance use, including the specific use of opioids, cannabis, and alcohol?
- Are certain occupations associated with co-occurring pain conditions and substance use or SUD?

⁸ Compton WM, Valentino RJ, DuPont RL. 2021. Polysubstance use in the U.S. opioid crisis. *Molecular Psychiatry* 26:41-50. <https://doi.org/10.1038/s41380-020-00949-3>

⁹ Pickens CM, Hoots BE, Casillas SM, Scholl L. 2022. Prevalence of and characteristics associated with single- and polydrug-involved U.S. Emergency Department Visits in 2018. *Addictive Behaviors* 125(February), 107158.

¹⁰ Liu S, Scholl L, Hoots B, Seth P. 2020. Nonfatal Drug and Polydrug Overdoses Treated in Emergency Departments - 29 States, 2018-2019. *MMWR Morb Mortal Wkly Rep.* 69(34):1149-1155. doi: 10.15585/mmwr.mm6934a1. PMID: 32853194; PMCID: PMC7451974.

¹¹ Kariisa M, Patel P, Smith H., Biting J. 2021. *Notes from the Field: Xylazine Detection and Involvement in Drug Overdose Deaths – United States, 2019.* *MMWR Morb Mortal Wkly Rep* 2021;70:1300–1302. DOI: <http://dx.doi.org/10.15585/mmwr.mm7037a4>.

¹² Mattson CL, Chowdhury F, Gilson TP. 2022. *Notes from the Field: Trends in Gabapentin Detection and Involvement in Drug Overdose Deaths — 23 States and the District of Columbia, 2019–2020.* *MMWR Morb Mortal Wkly Rep* 2022;71:664–666. DOI: [http://dx.doi.org/10.15585/mmwr.mm7119a3external icon](http://dx.doi.org/10.15585/mmwr.mm7119a3external%20icon)



- What is the relationship between SUD and other comorbid conditions, including mental illness, trauma, traumatic brain injury, and individuals with HIV (including those with active infections as well as long-term survivors)?

Harm Reduction

The Drug Data IWG also identified harm reduction as a topic where more data is needed to inform policy. Harm reduction emphasizes engaging directly with people who use drugs (PWUD) to prevent overdose and infectious disease transmission, improve the physical, mental, and social wellbeing of those served, and offer low-threshold options for accessing SUD treatment and other health care services. The traditional health care system may not always have the capacity to consistently meet PWUD where they are, thus highlighting a need for community programs offering harm reduction services that can build trust and engagement between PWUD and service providers, including outreach workers. PWUD, regardless of whether they have an SUD, can benefit from harm reduction services, including naloxone distribution, comprehensive syringe services programs, drug testing strips, and other strategies aimed at reducing the negative consequences associated with drug use.

Harm reduction organizations may face unique challenges associated with data collection from individuals seeking their services. This could be because PWUD experience stigma, and also include vulnerable populations, such as people experiencing homelessness or unstable housing. PWUD are also at a disproportionately high risk of overdose and contracting potentially sensitive infectious diseases, such as hepatitis B, hepatitis C, and HIV. Further work remains to identify and better understand harm reduction-specific data challenges. Better data related to the utilization of harm reduction services can provide insights on their effectiveness, disparities in their availability and use, and other barriers, including socio-structural barriers and stigma, as well as facilitators, to accessing harm reduction services. Implementation of harm reduction policies can vary across states and even between counties, highlighting the need to identify best practices and policies that improve the safe, legal, and efficient operation of harm reduction programs, and to ensure that they are equitably implemented. Conducting more policy evaluations would contribute to a broader understanding of successes and challenges related to harm reduction initiatives across diverse populations and geographic locations.

Overall Response to the Opioid Crisis

While many of the policy questions listed above refer to crosscutting themes relating to SUD and substance use more broadly, Drug Data IWG members emphasized the need for data to address the opioid crisis specifically, given the large proportion of overdose deaths involving opioids. The overarching question was, “what is the trajectory of the opioid crisis and what can be done to influence it?” It is important to note that the opioid crisis has evolved over time; initially being driven by prescription opioids, then shifting to heroin, and now accelerating with the dominance of fentanyl analogues. Therefore, it is necessary that we develop a tailored approach to address the ever-evolving nature of the opioid crisis.



Opioid-related policy questions that need improved data include:

- What is the availability and uptake of medications for opioid use disorder (MOUD) across the United States?
- Who lacks access to MOUD, and how can access be improved in an equitable manner, including for underserved populations in rural areas, carceral settings, those experiencing homelessness, and for racial, ethnic, sexual orientation, gender identity, and religious minorities?
- What is the extent of naloxone use and is it available to people who need it most?
- How can responses by law enforcement and public health be better coordinated?
- What is the impact of opioid use on specific sub-populations, such as perinatal women, opioid-exposed infants and children, active military and veterans, and among older adults?
- How can rates of opioid misuse and opioid use disorder be reduced among employees in safety-sensitive occupations (e.g., transportation, construction, and manufacturing)?
- How can testing for fentanyl be increased, both in terms of testing the actual drug supply, as well as testing biological specimens from patients who interact with the healthcare system?
- What is the extent of fentanyl use and fentanyl use disorder, and what are the best fentanyl-specific treatment and supportive care protocols?

Correlates of Drug Policy

A final policy-relevant topic area identified by Drug Data IWG member agencies for which more data is needed relates to societal-level factors that influence drug policy. These factors include, but are not limited to, social determinants of health, which have a complex multi-directional relationship with drug use, access to treatment, and subsequent health outcomes.^{13,14}

There are a number of databases that track drug policy information, some with the support of federal funding, and can be a starting point for policy-related analyses. Table 1 is an illustrative, but not exhaustive, listing of these resources.

¹³<https://grants.nih.gov/grants/guide/notice-files/NOT-DA-21-050.html>

¹⁴<https://www.samhsa.gov/behavioral-health-equity>



Table 1. Databases on Substance Use Policy

<i>Database Name</i>	<i>Host</i>	<i>URL</i>
Alcohol Policy Information System	National Institute on Alcohol Abuse and Alcoholism	https://alcoholpolicy.niaaa.nih.gov/
Opioid Environment Policy Scan	University of Chicago	https://oepps.ssd.uchicago.edu/
Prescription Drug Abuse Policy System	Temple University	https://pdaps.org/
OPTIC-Vetted Policy Data Sets	RAND Corporation	https://www.rand.org/health-care/centers/optic/resources/datasets.html
State Cannabis Policy Enactment Database	National Conference of State Legislatures	https://www.ncsl.org/research/health/state-cannabis-policy-enactment-database.aspx
Injury Prevention Legislation Database Opioid Abuse Prevention	National Conference of State Legislatures	https://www.ncsl.org/research/health/injury-prevention-legislation-database.aspx

Drug Data IWG members specifically highlighted the need for data to better understand the impact of potential policies or regulatory changes, such as:

- the federal legalization of cannabis
- U.S. sentencing policy on drug offenders in federal prison
- telehealth regulations related to the prescribing of MOUD
- COVID-19 regulatory flexibilities for methadone-based MOUD interventions

Figure 1 illustrates the dynamics of each of the drug policy thematic areas discussed in this section. Each of these thematic areas are interconnected and demonstrate the need for a multidisciplinary approach to improving our data systems to inform drug policy.



Figure 1. Thematic Areas for Drug Policy Research Questions

Data Needed to Facilitate the Use of Evidence in Drug Control Policymaking and Monitoring

The SUPPORT Act also requires that the Data Plan identify a list of data needed to inform drug policy. The Drug Data Plan relies largely on federally funded data sources, but also utilizes data collected by state, local, and commercial entities.

Drug data originate from a range of sources, including from individual records, databases of transaction events, representative sample surveys, laboratory tests of biological specimens or drug seizure samples, community-level attributes, qualitative measurements, and other potential sources. Figure 2 provides illustrative examples of each of these sources. Not all of these sources are fully available presently, which highlights the need to update and improve existing data, as well as identify and obtain new data sources.

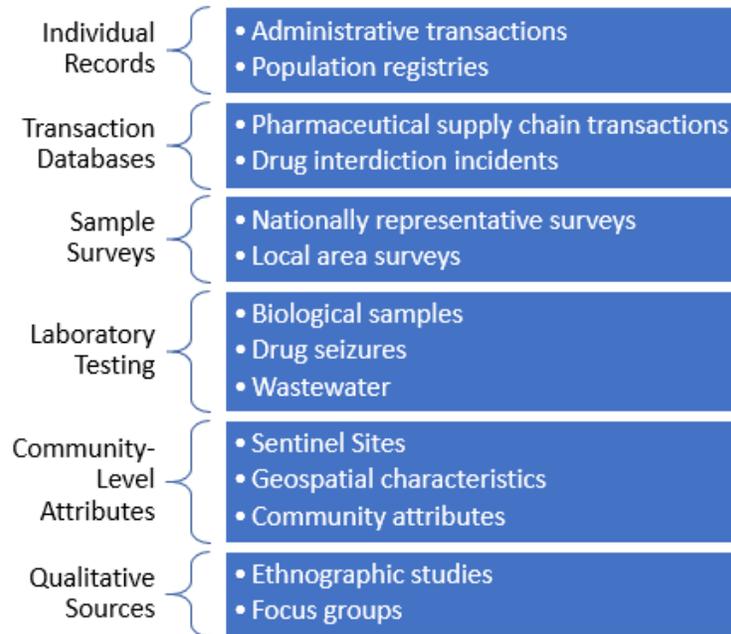


Figure 2. Data Sources for Informing Drug Policy

There are a number of existing federal data sources, each with their own strengths and limitations. Table 2 provides a list of core drug data sources that are currently used by Drug Data IWG members. Some of these data sources are undergoing improvement or enhancement efforts (see Appendix C for descriptions). To address limitations of existing data collection efforts, there is a need identify and develop new data sources to fill these gaps.

Example: Identifying Data Systems for New Data Needs

Some identified data needs cannot simply be added to existing data systems. For example, information is needed on fentanyl, and incorporating a question into NSDUH has been suggested. However, adding a survey question may not address this need if survey respondents are unaware that the drug product they obtain or ingest contains fentanyl. Perhaps alternative methods of collecting information on illicitly manufactured fentanyl should be explored, such as testing discarded packaging, compiling results from used fentanyl test strips, or examining patterns from drug checking services.



Table 2. Core Drug Data Sources That Are Currently Used

Short Name	Data Set Name	Agency	Collection Cycle
ARCOS	Automated Reports and Consolidated Ordering System	DEA	Ongoing
CCDB	Consolidated Counterdrug Database	DIA	Ongoing
DOSE	Drug Overdose Surveillance and Epidemiology	CDC/NCIPC	Monthly/Quarterly
Jails Data	Census of Local Jails	BJS	Every 5 years
MTF	Monitoring the Future	NIDA	Annual
NEMESIS	National Emergency Medical Services Information System	NHTSA	Ongoing
NFLIS	National Forensic Laboratory Information System	DEA	Ongoing
NSDUH	National Survey on Drug Use and Health	SAMHSA	Annual
NSS	National Seizure System	DEA	Ongoing
N-SSATS/ N-SUMHSS	National Survey of Substance Abuse Treatment Services/[National Substance Use and Mental Health Services Survey	SAMHSA	Annual
NVSS- Mortality	National Vital Statistics System Mortality data, Final or Provisional	CDC/NCHS	Annual/Monthly
SUDORS	State Unintentional Drug Overdose Reporting System	CDC/NCIPC	Every 6 months
TEDS	Treatment Episode Data Set	SAMHSA	Ongoing
TLR	Theft Loss Reporting Database	DEA	Ongoing

Some agencies, like VHA and DHA, have extensive data they maintain on treatment and other services that they provide, and are not included here since these are restricted records (but are discussed under the Record Linkage section).

In addition to the core existing drug data sources, there are a number of data sources that, through the course of agencies pursuing their specific areas of interest, collect drug-relevant information that can supplement insights obtained from core data sources. For example, data collected for HIV surveillance typically include information on injection drug use, since it is a major risk factor for HIV infection. Table 3 shows examples of these supplemental data sources that can be harnessed for addressing policy research questions.



Other data needs identified by agencies include:

- Geographic specificity; to address geographic variability
- Demographic sub-group detail (e.g., race/ethnicity, sexual orientation, gender identity, age, urbanization)
- Longitudinal/cohort data on substance use patterns, correlates, and outcomes.

Table 3. Other Supplemental Data Sources Containing Drug-Relevant Information from Local or National Samples

<i>Short Name</i>	<i>Data Set Name</i>	<i>Agency</i>	<i>Collection Cycle</i>
CMS	The Centers for Medicare and Medicaid Services collects data on the use and payment of medical services by program beneficiaries.	CMS	Ongoing
DAWN	Drug Abuse Warning System [nationwide public health surveillance system that captures data on emergency department (ED) visits related to recent substance use and misuse directly from the electronic health records of participating hospitals]	SAMHSA	Annual
IDU-SP	Injection Drug Use Surveillance Project [includes clients of syringe services programs and their drug-using peers]	CDC/Division of HIV Prevention	Ongoing
MMP	<i>Medical Monitoring Project</i> [for adults diagnosed with HIV infection in the United States and Puerto Rico, including drug and alcohol use]	CDC/Division of HIV Prevention	Ongoing
NEISS	National Electronic Injury Surveillance System	Consumer Product Safety Commission	Ongoing
NHBS	National HIV Behavioral Surveillance [three different populations at high risk for HIV: men who have sex with men (MSM), persons who inject drugs (PWID), and heterosexuals with risk factors for HIV infection (HET)]	CDC/Division of HIV Prevention	Rotating annual cycles



NHSS	National HIV Surveillance System	CDC/Division of HIV Prevention	Ongoing
NNDSS	National Notifiable Diseases Surveillance System [includes hepatitis, primary and secondary syphilis case report data, including substance use within the past twelve months]	CDC/Division of STD Prevention/Division of Viral Hepatitis	Ongoing
NPDS	National Poison Data System	American Association of Poison Control Centers	Ongoing
ODMAP	Overdose Detection Mapping Application Program [selected local area coverage]	ONDCP/HIDTA	Ongoing
SET-NET	Surveillance for Emerging Threats to Mothers and Babies Network [health information of people exposed to a health threat during pregnancy and their infants over time]	CDC/Division of HIV Prevention	Monthly/Quarterly
SSuN	STD Surveillance Network [includes random sampling of gonorrhea cases in ten jurisdictions and includes data on substance use within the past twelve months]	CDC/Divisions of STD Prevention	Ongoing
YRBSS	Youth Risk Behavior Surveillance System [includes questions on substance use at national, state, and local levels]	CDC/Division of Adolescent and School Health	Biennial



Methods and Analytical Approaches

The SUPPORT Act also requires that the Drug Data Plan provide a list of methods and analytic approaches that may be used to develop evidence to support the National Drug Control Strategy and related policy. Certainly, multiple methods and analytical approaches are needed to mitigate the limitations of existing individual data sources. These methods include ongoing *research and development*, *novel methods such as wastewater-based epidemiology*, *the use of sentinel sites to augment national data*, *record linkage*, *geospatial analysis*, *qualitative and other exploratory methods*, *modeling*, and *synthesis utilizing several data sources*, and *translating research findings to inform drug policy*. These are interrelated approaches and are not always mutually exclusive (Figure 3).

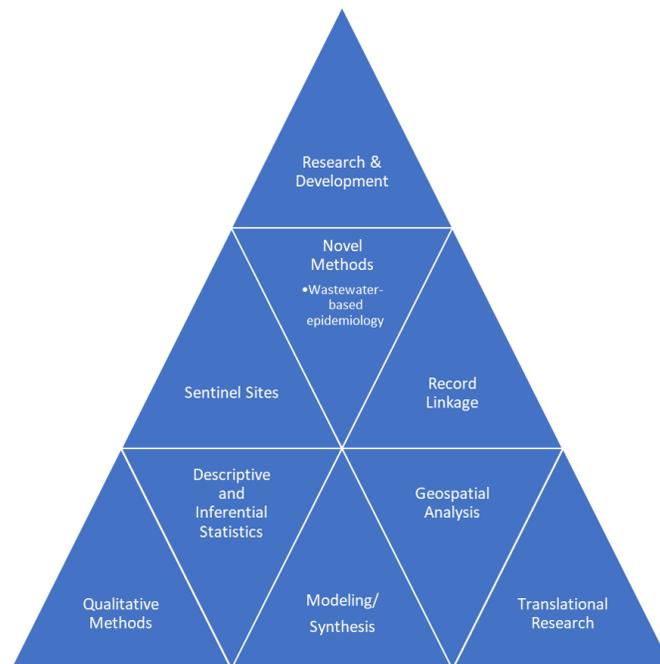


Figure 3. Potential Methods and Analytical Approaches for Informing Drug Policy

Research and Development

Research and development (R&D) include basic research as well as pilot testing, demonstration projects, and early implementation of promising approaches. R&D is central to the grant funding mechanisms at NIDA and NIJ. Examples include the ongoing grant support for developing methods for testing wastewater in local communities to detect opioid and other drug metabolites. FDA also funds research and development projects through various funding mechanisms, such as contracts, grants, and cooperative agreements. VHA is developing medical record-based predictive models and risk identification tools to help guide targeted prevention and screening efforts. CDC is investing in applied health research, particularly related to drug use and overdose prevention among youth.



Utilizing Novel Research Tools, such as Wastewater-Based Epidemiology

Typically emerging from R&D are novel research tools that may or may not be feasible to deploy at a national or regional scale. For example, wastewater-based epidemiology (WBE) is an innovative approach to measure drug consumption at the community level by sampling a source of wastewater to measure the levels of illicit drugs and their metabolites. WBE methods have been improving over the past two decades, with most of the scientific work coming from Europe. In the United States, WBE has received renewed interest following its application for detecting SARS-CoV-2 virus, with ongoing work being conducted at the National Institutes of Health¹⁵ and the CDC.¹⁶ NIDA has also funded recent studies, including one that is collecting data on opioid metabolites in community wastewater using a robotic sampling device.¹⁷ NIDA also funds the National Drug Early Warning System (NDEWS) which is conducting wastewater analysis to estimate weekly rates of fentanyl consumption in three U.S. cities.¹⁸ Among other federal WBE projects, an NIJ grant is utilizing forensic chemistry to detect both licit and illicit stimulants, an approach that could be modified to detect new and emerging drugs.¹⁹

While the utility of WBE does not necessarily apply to certain subject matter areas, like estimating drug overdose, it holds promise as a potential method for capturing drug consumption within a community, as well as to identify emerging drug threats. Further work remains to better understand the sensitivity and specificity of WBE and the impact of potential confounding variables on drug consumption estimates and trends over time.

Record Linkage

Linking individual records between and within organizations' data systems is an intricate process that can provide insights regarding an individual's health over time, including the types of services they receive across the continuum of care. Record linkage requires the highest levels of privacy and security protections for patients' personally identifiable information (PII) and all applicable government regulations must be carefully followed when conducting these linkages. Record linkages provide insights that can help inform treatment, and streamline services from different information and service providers. Table 4 provides examples of administrative data sources that have the potential to be linked to other data sources.

¹⁵ Wastewater Surveillance – Monitoring COVID-19 to Protect Public Health. Available at https://www.niehs.nih.gov/research/supported/translational/peph/webinars/wastewater_surveillance/index.cfm. Accessed on July 27, 2022.

¹⁶ National Wastewater Surveillance System (NWSS). Available at <https://www.cdc.gov/healthywater/surveillance/wastewater-surveillance/wastewater-surveillance.html>. Accessed on July 27, 2022.

¹⁷ The following grant links to wastewater research that have been funded by NIDA recently: [R44DA051105](#); [R44DA051106](#); [R15DA051792](#); [U01DA051126-02S2](#).

¹⁸ Wastewater Analysis of Fentanyl Consumption: 10/2021-03/2022. Available at https://public.tableau.com/views/StateandNationalOverdoseWebdashboard/FentanylAnalysis?%3Alanguage=en&%3Adisplay_count=y&%3Aorigin=viz_share_link%3A&%3AshowVizHome=no%3Aembed&%3Atoolbar=no. Accessed on July 27, 2022.

¹⁹ Wastewater Epidemiology To Examine Stimulant Trends (weTEST). Available at <https://nij.ojp.gov/funding/awards/2020-r2-cx-0013>. Accessed on July 27, 2020.



Record linkage can be narrowly defined for a specific purpose, such as:

- Connecting information from results of medical examiner or coroner death investigations with death certificates, as a source of additional detail and understanding of overdose fatalities.²⁰
- Linking treatment admission records to discharge outcomes.
- Tracking how effectively persons misusing drugs are connected to opioid use disorder treatment and its impact on health outcomes.
- Enabling analyses of risk and protective factors for overdose and other premature mortality to inform and incentivize quality improvement of relevant interventions and programs.

Table 4. Administrative Data Sources for Potential Record Linkage

<i>Data Source</i>	<i>Agency</i>
Bureau of Prisons population data	BOP
Death certificate data	
Department of Defense medical records data	DOD
Electronic health records	
Emergency medical services data	
Federal Justice Statistics program data - linked arrest, court, conviction, sentencing, and prison records	BJS
Hospital discharge data	AHRQ
Indian Health Service data	IHS
Medical examiner/coroner data	
Medicare/Medicaid claims data	CMS
National Death Index records	NCHS
Prescription drug monitoring program (PDMP) data	State
State Unified Corrections System	NIC
Substance use treatment services data	SAMHSA
Tribal crime and justice data	BJS
Tricare Prime or Plus during the measurement month. Sources: DEERS, PDTS (Pharmacy Data Transaction System), Designated Provider Pharmacy	DHA

²⁰ The Federal Interagency Medicolegal Death Investigation Working Group is an ongoing effort that has implications on drug overdose information, including linking medical examiner or coroner results with death certificate data. Available at <https://www.ojp.gov/resources/ojp-hhs-mdi-wg>. Accessed on July 28, 2022.



Data, Standardized Inpatient Data record, Designated Provider Claims, Purchases Care Professional Claims Data.	
U.S. Sentencing Commission records	
Veterans Health Administration Corporate Data Warehouse	VA
Vital statistics records (including birth and death certificate data)	

An example of record linkages can be illustrated through the National Hospital Care Survey (NHCS) which integrates inpatient data with records from emergency departments (EDs), outpatient facilities, and ambulatory surgical facilities. This will allow linking the care provided to the same patient through the collection of personal identifiers, and it is also possible to link the records to the National Death Index and Medicare and Medicaid data to obtain a more complete picture of patient care, including substance use-related ED visits.²¹

For tracking individual needs and services, record linkage can be a complex process that involves more than one agency and requires legal safeguards to ensure individual data is not misused in punitive ways that may worsen health inequities and drive PWUD away from seeking care. Some record linkage work is already under way at the VA, HHS, DoD, and the CDC and lessons learned from these efforts can be applied to future work on record linkage between agencies.

Sentinel Sites

When data cannot be collected for an entire population, sentinel sites, or a small number of health facilities, can be useful in tracking drug use and related conditions. Using clear guidelines to ensure consistency, data from multiple sources are collected in select locations that are deemed to be informative. Although this does not provide a nationwide picture, insights can be gained from carefully selected sentinel locations.

An example of the use of sentinel sites is the National Drug Early Warning System (NDEWS), which consists of 17 sentinel sites across the country and a coordinating center designed to provide periodic indicator data, including early warnings of emerging drugs. With NIDA funding, NDEWS assembles traditional surveillance data for local areas from treatment admissions, poison control reports, hospital and emergency department records, mortality data from medical examiners, and laboratory sampling of seized drugs. SAMHSA's Drug Abuse Warning Network (DAWN) utilizes sentinel sites to capture data on ED visits related to recent substance use and misuse directly from the electronic health records of participating hospitals. Sentinel sites can provide complementary insights to nationally representative data by gathering more detailed information from multiple sources in specific locations.

²¹ National Center for Health Statistics, National Hospital Care Survey. Available at <https://www.cdc.gov/nchs/nhcs/index.htm>. Accessed on July 28, 2022.



Geospatial Analysis

Geospatial analysis in the area of drug use research is currently underutilized to inform policy. Work in this area has grown significantly over the past several decades, however, some current programmatic and applied research efforts are still limited to specific geographic coverage or focused on specific topics, such as the opioid epidemic.^{22,23,24} CDC is working on a geospatially based Overdose Anomaly Toolkit with the Council of State and Territorial Epidemiologists (CSTE). This Toolkit is intended to improve the use of overdose surveillance data and guide public health prevention and response activities in an ever-changing drug environment with increasingly lethal drugs. The Toolkit provides guidance, tools, and techniques featuring real examples of jurisdiction-based activities to epidemiologists and other public health professionals seeking to better prepare for, detect, and respond to drug overdose outbreaks in their communities.²⁵

While identifying areas of higher prevalence or incidence is straightforward when geographically specific data are available, there is much more that can be done by harnessing the tools of Geographic Information Science (GISc), including formal “hotspot” analysis. Such analyses can be an integral part of identifying high-risk areas and in planning targeted interventions, using the geospatial relationships between drug use patterns, demographic attributes, and other location-specific data, such as location of treatment resources. For example, rural-urban differences provide a useful lens for examining patterns of substance use, morbidity, and mortality rates, along with the distribution and accessibility of treatment and other services, such as harm reduction and peer recovery support services, relative to underserved populations.

To make progress in this area, it would be useful for the Drug Data IWG to engage with the Federal Geographic Data Committee²⁶ to better understand their efforts in the drug research area. From a research and innovation perspective, the VA is looking to engage with the Open Geospatial Consortium,²⁷ the leading international geographic information standards organization, to explore opportunities for improved use of geospatial and remote sensing technology.

²² Thomas YF, Richardson D, Cheung I, eds. *Geography and Drug Addiction*. 2008. Springer.com.

²³ Washington/Baltimore High Intensity Drug Trafficking Area. ODMAP (Overdose Mapping and Application Program). Available at <https://www.hidta.org/odmap/>. Accessed on July 28, 2022.

²⁴ ESRI. Responding to the Opioid Crisis with GIS. [n. d.] Available at <https://www.esri.com/content/dam/esrisites/en-us/media/pdf/responding-to-the-opioid-crisis-with-gis-173104.pdf>, accessed on July 27, 2022.

²⁵ CSTE Overdose Anomaly Toolkit. Available at <https://resources.cste.org/ODToolkit-v1/Home/Introduction> . Accessed on July 28, 2022.

²⁶ Federal Geographic Data Committee. Available at <https://www.fgdc.gov/index.html#>. Accessed on July 28, 2022.

²⁷ Open Geospatial Consortium. Available at <https://www.ogc.org/>. Accessed on July 28, 2022.



Qualitative and Other Exploratory Methods

Qualitative methods are commonly used to extract information, particularly when a phenomenon is illicit, such as drug use and its related behaviors. Ethnography,²⁸ focus groups, and other qualitative methods can inform policy when surveys cannot reach smaller sub-populations and proscribed behaviors. This type of information can provide more rich, detailed insights on drug use behaviors, experiences, motivations, and other factors that cannot generally be captured through standardized survey questions. For example, narrative text included in SUDORS provides opportunities to identify themes of circumstances surrounding overdose deaths (e.g., COVID-related circumstances mentioned in narratives during the early stages of the pandemic). DAWN and N-SUMHSS collect qualitative data, and SAMHSA is planning on analyzing and disseminating reports based on this information.

While surveys can over-sample specific subgroups (such as youth in NSDUH), this becomes increasingly expensive with smaller subgroups of interest (such as racial, sexual, or religious minorities), and when assessing rare events. Oversampling does not guarantee that such information is valid or reliable. In such instances, qualitative studies should be considered as an alternative method for obtaining useful information.

Modeling/Synthesis

Specific data sources provide slightly different and partial accounting of what takes place in the real world. It is therefore necessary to examine multiple data sources and triangulate answers to policy questions. Policy questions regarding the amounts users spend on illicit drugs, or the economic costs of drug use to society,²⁹ are questions that can only be answered by synthesizing data from multiple sources.

With regards to drug overdose, information can be gleaned from death certificates (fatal overdoses), EMS responses (such as NEMESIS), EDs (DOSE, DAWN, HCUP), hospital inpatient records (HCUP), and other potential sources. Nevertheless, these sources of information do not capture individuals who experienced a nonfatal overdose, but did not seek medical attention. For example, a scenario that may not be captured by current data systems is if a person overdoses on an opioid and is revived by a bystander with available naloxone and does not call 911 or go to a hospital. In trying to answer a policy question on the effectiveness of naloxone distribution, answers may require analysis of incomplete but related data sources.

There is a growing body of work on simulation modeling to predict and forecast changes in overdose burden over time, the potential impact of intervention strategies within and across sectors, and how changes in systems could impact overdose rates.³⁰ A recent example of a more

²⁸ Agar MH. *Ethnography: An Overview*. Substance Use & Misuse. 1997. 32(9): 1155-1173.

²⁹ An important issue that will need to be addressed in estimating economic costs is what approach best suits policy needs. Many studies use the cost-of-illness methodology, while some recent ones have used the value-of-a-statistical-life approach. These yield widely divergent estimates that sometimes preclude comparisons.

³⁰ Cerda M, Jalali MS, Hamilton AD, et al. A Systematic Review of Simulation Models to Track and Address the Opioid Crisis. *Epidemiol Rev*. 2022 Jan 14;43(1):147-165. doi: 10.1093/epirev/mxab013. Available at <https://pubmed.ncbi.nlm.nih.gov/34791110/>. Accessed on July 28, 2022.



targeted simulation modeling system was developed by the University of Pittsburgh with CDC funding. FRED (A Framework for Reconstructing Epidemiological Dynamics) includes a simulation module for opioid use disorder and overdose.³¹ Another study used proxy data sources encompassing health, law enforcement, and online data to enable more timely estimates.³²

Investments in advanced statistical modeling are being made by the federal government to inform policy for other health conditions. For example, the CDC's newly established Center for Forecasting and Outbreak Analytics (CFA)³³ is an effort that could be emulated for the drug overdose epidemic. CFA's goal is to enable timely, effective decision-making to improve outbreak response using data, modeling, and analytics by producing models and forecasts to characterize the state of an outbreak and its trajectory, inform public health decisionmakers on potential consequences of deploying control measures, and support innovation to continuously improve the science of outbreak analytics and modeling.³⁴

Translational Research

Scientific findings resulting from data and analytical activities need to be translated into interventions and, in particular, specific policy recommendations. In addition, data and research need to be able to assess the consequences of policy actions. Data must be reliable and valid, but also produced in a time frame and format that is meaningful for input to programmatic and policy formulation, development, and evaluation. Indeed, policy and programmatic questions must inform the research agenda, and research findings must inform policies and programs, thus identifying a need for continued dialogue between data practitioners and policymakers. Translational research is an emerging field which seeks to translate basic science discoveries into more meaningful, applicable results that can directly benefit human health. In the context of drug policy, there are a number of factors that influence whether data are used to inform policy and programmatic decisions. These factors include: timeliness of the data, whether an intervention being tested is relevant to those it is intended to serve, and whether a community has the capacity to deliver on the evidence-based program or policy.

In general, a comprehensive data science approach is necessary to integrate the methods informing all aspects of drug policy questions. The data science framework includes the use of analytical approaches, processes, and systems to extract insights from large, complex datasets and complementary sources. Approaches include, but are not limited to, data linkage and integration, artificial intelligence (e.g., machine learning, deep learning, natural language processing), predictive algorithms, digital interventions, and system dynamics modeling. Data science approaches can be used to describe characteristics, patterns, and trends of addiction and overdose; diagnose and understand they occur; predict at risk individuals and communities; and develop solutions to improve treatment and associated outcomes. Translational research should

³¹ FRED Simulator for Opioid Use Disorder and Overdose. Available at https://fred.publichealth.pitt.edu/cdc_opioids. Accessed on July 28, 2022.

³² Summer SA, Bowen D, Holland K, et al. 2022. Estimating Weekly National Opioid Overdose Deaths in Near Real Time Using Multiple Proxy Data Sources. *JAMA Network Open* 5(7): e2223033. doi:10.1001/jamanetworkopen.2022.23033.

³³ Center for Forecasting and Outbreak Analytics, CDC. Available at <https://www.cdc.gov/forecast-outbreak-analysis/index.html>. Accessed on July 28, 2022.

³⁴ Center for Forecasting and Outbreak Analytics, Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/forecast-outbreak-analysis/index.html>, accessed on July 26, 2022.



also account for equity to ensure that the data informing the development of policies and interventions are culturally appropriate and will be a driver for an equitable response to the drug overdose epidemic. This can also be applied to drug supply and availability of treatment and support services. To be successful, data science approaches must overcome challenges related to data access and linkage, interoperability, equity, sustainability, transportability, privacy, and computing resource adequacy.

Intersection of Thematic Areas and Analytical Approaches for Drug Policy Research

The methods and analytical approaches outlined above are generally applicable to most of the topical areas discussed throughout this plan, but not all are equally appropriate. This is particularly true as methods become more specific. For example, wastewater testing is not an ideal method for providing data on overdose rates *per se*. However, in addition to monitoring consumption of illicit drugs within a community, wastewater can also monitor consumption of MOUD and naloxone which provide insights on the availability and use of lifesaving resources.

Table 5 provides an overview of the different methods and analytical approaches described in the Drug Data Plan and whether could be used to inform specific drug policy thematic areas. Some methods and analytical approach may not be appropriate for specific thematic areas. For example, linking individuals' records might be provide useful insights for informing policy on treatment and recovery, but may not be appropriate for assessing changes in the drug supply.

The Data Plan's most important feature is that it incorporates maximum flexibility to accommodate a constantly evolving drug scene – so that causes, consequences, and correlates of drug phenomena can be examined in a scientifically rigorous manner, utilizing the myriad tools and approaches as appropriate and as resources permit to inform, target, and evaluate drug policies and programs.



Table 5. Drug Policy Relevant Thematic Areas and Potential Analytical Approaches Discussed by the Drug Data IWG

Subject Matter	Methods and Analytical Approaches								
	<i>R&D</i>	<i>Novel Research Tools, incl. Wastewater-Based Epidemiology</i>	<i>Record Linkage</i>	<i>Sentinel Sites</i>	<i>Statistics</i>	<i>Geospatial Analysis</i>	<i>Qualitative and Other Exploratory Methods</i>	<i>Modeling/Synthesis</i>	<i>Translational Research</i>
Treatment and Recovery	✓		✓	✓	✓	✓	✓	✓	✓
Drug Overdose	✓		✓	✓	✓	✓	✓	✓	✓
Drug Supply and Emerging Drugs	✓	✓	✗	✓	✓	✓	✓	✓	✓
Etiology of Substance Use and Substance Use Disorder, Including Primary Prevention	✓	✓	✓	✓	✓	✓	✓	✓	✓
Poly-substance Use and Comorbidity	✓		✓	✓	✓	✓	✓	✓	✓
Harm Reduction	✓		✓	✓	✓	✓	✓	✓	✓
Overall Response to the Opioid Crisis	✓	✓	✓	✓	✓	✓	✓	✓	✓
Correlates of Drug Policy	✓	✗	✗	✓	✓	✓	✗	✓	✓

Note: Check marks indicate methods and analytic approaches that could inform drug policy relevant thematic areas. X's indicate methods and analytic approaches that do not apply to specific thematic areas.



Challenges

The SUPPORT Act also requires that the Drug Data Plan include a list of challenges to developing evidence to support policymaking, including any barriers to accessing, collecting, or using relevant data. Many of these challenges will require trade-offs to address, and a summary of major issues are outlined here.

Throughout all of the efforts noted in this document, privacy concerns are particularly important and must always be addressed. Given the unfortunate stigma that impacts persons who use drugs, and the legal consequences that may be faced if drugs are used, data collection in this space must always balance data specificity with the need for confidentiality. Issues of reporting on small cell sizes in tables and other report formats are critical and must be crafted in a way to protect the identity of individuals. As this is an overarching theme relevant to all data collection and analytic efforts, a separate section devoted to privacy concerns is not present in this report but it is understood that they are relevant for all activities noted in this plan. All data collection efforts and analytic uses must follow all relevant governmental regulations.

Timeliness and Accuracy

There is a continuum between timeliness and accuracy; quick, near-real-time reporting is often accompanied by some concessions in precision, whereas standardized data are often burdened with more time-consuming quality assurance tasks. For example, when monitoring ED visits for drug overdose, syndromic surveillance utilizes preliminary diagnoses and chief complaint descriptions to rapidly assess changes in trends, but data are not suitable for providing count estimates nor are estimates comparable between states due to variation in the quality and consistency of data reported by hospitals. On the other hand, hospital discharge data can provide more accurate estimates using final diagnosis information in a standard format. Discharge data enables count estimates that are comparable between states, but timeliness of this data can lag by several months. This tension between timeliness and accuracy permeates drug data and will require a delicate balance as specific elements of the Drug Data Plan are addressed.

National Data vs. Smaller Geographic Areas

More data sources are available for describing the drug landscape at the national level compared to those which provide state and local estimates. Few data sources, such as NVSS and SUDORS, have the ability to examine smaller geographic areas, but these are uncommon. SAMHSA has used small area estimation methods to produce state and substate-level statistics. Indeed, some of the high-risk subgroups may have small sample sizes in more difficult to reach areas. Rural populations are a good example, and these are typically obscured in aggregate national data, not only for substance use, but equally important, in the delivery of essential services. As noted in the Methods and Analytical Approaches section, reliance on data from sentinel sites can provide important details that are not available from broad nationally representative findings. For instance, integrated local area studies can yield insights, such as return-on-investment estimates, that can still feed into informing national policy.



Demographic Specificity for Sub-Populations of Interest

The Biden-Harris Administration has made equitable data a priority, as directed by Executive Order 13985.³⁵ Data provide key indicators in advancing equity in public health and public safety. In order to pursue equity in drug policy, the Administration needs to maximize its ability to describe the drug situation for specific demographic and geographic subgroups. Some sub-populations who are at high risk of drug use fall outside the realm of standard surveys. For example, NSDUH excludes people experiencing homelessness and persons residing in institutions (e.g., incarcerated individuals). As such, there is a need to harness data sources that complement sample surveys and deploy an arsenal of alternative tools, including qualitative methods, to get information on these subgroups while at the same time protecting privacy. One potential solution could be the use of natural language processing which can analyze text in electronic health records to identify individuals in specific subgroups.

A number of efforts by federal agencies are underway to improve the collection of equitable data for race, ethnicity, sexual orientation, gender identity, disability, income, veteran status, age, and other key demographic variables.³⁶ However, these will need to be expanded even further in order to address drug policy information needs.

Logistics and Ethics of Record Linkage

Record linkage was a major topic that emerged from the agency inputs. A number of logistical and ethical challenges were discussed related to this topic. The first challenge discussed was regarding the navigation of legal restrictions at all levels of government to ensure the secure use, reuse, storage, transfer, and destruction of data for which linkage permissions may not have been explicitly consented at the time of data collection. Agencies also discussed the importance of balancing the privacy and usefulness of data to determine what data beyond summary statistics should be released for use by researchers outside the agencies. A common framework for ensuring standard data protections and ethical use of linked data should be established to guide record linkages at all levels of government. For example, VA has issued ethical guidance for use of Veteran data.³⁷

Other technical challenges associated with record linkage included understanding how and why specific data were collected in the first place, the quality and completeness of data being linked, and recognition that not all records may successfully match or link between databases. Bias analyses should be performed before and after data linkage to understand whether certain subpopulations were lost during the linkage process. Creating clear and comprehensive data documentation would also be valuable and improve transparency during the data linkage process. This would help data users to easily identify the strengths, weaknesses, and fitness for use of each dataset without relying on the collecting agency to respond to individual requests.

³⁵ Executive Order 13985. *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*. January 20, 2021.

³⁶ White House. A Vision for Equitable Data: Recommendations from the Equitable Data Working Group. Available at: <https://www.whitehouse.gov/wp-content/uploads/2022/04/eo13985-vision-for-equitable-data.pdf> Accessed on December 16, 2022.

³⁷ Ethics Principles for Access to and Use of Veteran Data. Available at <https://www.oit.va.gov/about/ethical-data-use/>. Accessed on August 1, 2022.



Resources and Staffing

The federal budget cycle timeline should be considered when developing data collection and research activities. Strategic planning with a lead time of one year or more may be required in order to finance data and research activities in future fiscal years. In practical terms, if federal agencies want to add questions to a survey or start a new data collection effort, they have to wait until the next fiscal year, at a minimum - and generally 2 to 3 years out, to find funding for it.

The availability of staff and other resources necessary to perform advanced data analyses also impacts the use of existing data sources. For example, federal agencies have a number of rich data sources, including the NVSS, SUDORS, and NSDUH that could be better utilized.

Analytical work can also be contracted out, but this is dependent on the availability of funds. For example, ONDCP has periodically commissioned the study “What America’s Users Spend on Illegal Drugs” which synthesizes data from multiple sources, including NSDUH, price and purity information, and the now-defunct Arrestee Drug Abuse Monitoring (ADAM) program. These analytical studies, including estimates of economic costs of drug use to society, and an updated review of drug data needs, are typically contracted out, but only when funding is available.

Making Drug Data and Research Results Accessible to Policy Makers

Translating data and research into useful products to inform and assess drug policy must be streamlined and made accessible to support a more comprehensive, multi-faceted, and evidence-based approach to drug control efforts. It is important to identify mechanisms to make drug data and its associated findings routinely available, rather than assuming that the linkage between research and policy will inherently occur. As noted in the Translational Research section, cultivating this two-way relationship between policy and research needs to become an explicit process with strategic implementation.



Steps for Implementation

Finally, the SUPPORT Act requires a description of the steps the Director and the head of each National Drug Control Program agency will take to effectuate the Drug Data Plan.

A key foundation for implementing the Drug Data Plan is the Evidence Act³⁸ and its subsequent OMB guidance documents. It was established to advance evidence-building in the federal government by improving access to data and expanding evaluation capacity. The steps outlined below are consistent with this goal.

Inventory of Existing Resources and Identify Data Gaps

Conduct an inventory of inter-agency resources to help identify data gaps and deficiencies. This will help drug control agencies define what additional data collection is needed to inform key drug policy questions.

Establish Data Sharing Arrangements

Identify and establish data sharing arrangements between drug control stakeholders and agencies. As noted earlier, some agencies have begun data sharing arrangements, but at present, these are not the norm. HIDTA's Overdose Response Strategy (ORS) is an example of a unique collaboration between public health and public safety, created to help local communities reduce drug overdoses and save lives by sharing timely data, pertinent intelligence and evidence-based and innovative strategies.

Continually Review and Improve Existing Drug Data Systems

Existing data systems each have unique strengths and challenges that require continued maintenance and improvement. Past experience has shown that data sources can be at risk of being discontinued if decisionmakers do not see value in the information provided. This can result in gaps in knowledge to inform policy. Thus, agencies need to be proactive in promoting the usefulness of these data systems to continue to provide robust data in a timely manner to inform policy. The Drug Data IWG should host discussions regarding the rigor, timeliness, and utility of datasets collected by each agency with an aim to ensure that best practices of data collection and analysis are shared and utilized, and mid-course corrections can be made as needed in the best interests of achieving the goals of the NDCS.

Locate an Agency Locus for New Data Collection Efforts

New data collection efforts, such as wastewater-based epidemiology, require an agency to manage and take ownership. While ONDCP has funded pilot studies in the past, it is a policy agency and does not manage routine data collections. Therefore, feasible data collection that can be scaled up or made into a continuing data source will require that funds are allocated to support such an activity within an appropriate data collection agency.

Maintain Coordination among Agencies Involved in Collection and Use of Drug Data

Data sources from multiple agencies may include some overlap, so it is important to leverage data and research assets from more than one agency. This will require continued coordination, a function that is embedded in the Drug Data IWG.

³⁸ Public Law 115-435. Foundations for Evidence-Based Policymaking act of 2018.





APPENDIX A: LIST OF ABBREVIATIONS

CDC	Centers for Disease Control and Prevention
DEA	Drug Enforcement Administration
DOSE	Drug Overdose Surveillance and Epidemiology
DAWN	Drug Abuse Warning Network
ED	emergency department
EMS	emergency medical services
GISc	Geographic Information Science
HCUP	Healthcare Utilization Project
HIDTA	High Intensity Drug Trafficking Area
HIV	human immunodeficiency virus
MOUD	medications for opioid use disorder
NIDA	National Institute on Drug Abuse
NDEWS	National Drug Early Warning System
NEMSIS	National Emergency Medical Services Information System
NSDUH	National Survey on Drug Use and Health
NVSS	National Vital Statistics System
ONDCP	Office of National Drug Control Policy
OUD	opioid use disorder
PII	personally identifiable information
PWUD	people who use drugs
R&D	research and development
SUD	substance use disorder
SUDORS	State Unintentional Drug Overdose Reporting System
WBE	wastewater-based epidemiology
WONDER	Wide-ranging ONline Data for Epidemiologic Research



APPENDIX B: STATUTORY LANGUAGE ON THE DATA PLAN

21 U.S.C. § 1705(c)(1)(M), National Drug Control Strategy

(M) A systematic plan for increasing data collection to enable real time surveillance of drug control threats, developing analysis and monitoring capabilities, and identifying and addressing policy questions related to the National Drug Control Strategy and Program, which shall include—

(i) a list of policy-relevant questions for which the Director and each National Drug Control Program agency intends to develop evidence to support the National Drug Control Program and Strategy;

(ii) a list of data the Director and each National Drug Control Program agency intends to collect, use, or acquire to facilitate the use of evidence in drug control policymaking and monitoring;

(iii) a list of methods and analytical approaches that may be used to develop evidence to support the National Drug Control Program and Strategy and related policy;

(iv) a list of any challenges to developing evidence to support policymaking, including any barriers to accessing, collecting, or using relevant data;

(v) a description of the steps the Director and the head of each National Drug Control Program agency will take to effectuate the plan; and

(vi) any other relevant information as determined by the Director.



APPENDIX C: DESCRIPTION OF EXISTING MAJOR DRUG DATA SOURCES

This appendix contains narrative information about existing data sources referenced in Table 2, arranged in alphabetical order of the data set name.

Automated Reports and Consolidated Ordering System (ARCOS): ARCOS is an automated, comprehensive drug reporting system which monitors the flow of DEA all schedule I and schedule II controlled substances and some Schedule II narcotics from their point of manufacture through commercial distribution channels to point of sale or distribution at the dispensing/retail level.

Consolidated Counterdrug Database (CCDB): The Consolidated Counterdrug Database (CCDB) compiles information on detection and monitoring events pertaining to the aerial and maritime transit of illicit drugs toward the United States. CCDB events are reviewed through a quarterly, interagency vetting process that validates each event. Data from CCDB are summarized by the Defense Intelligence Agency

Drug Overdose Surveillance and Epidemiology (DOSE): Data on nonfatal overdoses from two separate sources: (1) *discharge/billing data* captured from emergency department records using the standard International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) coding system and the standard uniform billing (UB-04) formats developed by National Uniform Billing Committee and the American Hospital Association. The universal use of the standard codes, based on physician's confirmed diagnoses, medical procedures performed during the hospital visit and external causes of injury, allows national, state and local surveillance of drug overdoses treated in hospitals that can be compared over time and across states and localities, and (2) *syndromic data* captured by health departments. Syndromic data rely mostly on unstandardized text such as chief complaint (i.e., purpose of the visit), clinical impression (i.e., healthcare professional's assessment), and triage notes (i.e., additional context provided by the patient, law enforcement, emergency medical services, or patient's family/friends). Syndromic data are captured in near real-time and often include diagnosis codes, but they may not represent final clinical diagnoses.

Census of Jails (COJ): This data collection is conducted roughly every 5 years, and asks the nation's 3,000 local jails (city, county, regional, and private) to report on their populations, including one-day custody counts by sex, race and Hispanic origin, conviction status, and severity of offense (felony and misdemeanor); counts of non-U.S. citizens by conviction status; juvenile counts; holds for state and federal authorities; admissions and releases; and average daily population by sex. It also collects data on facility information, including rated and design capacity, and staffing measures. In 2019, BJS added a section to the COJ to measure opioid testing and treatment programs in local jails, and asked jail administrators to enumerate the number of persons admitted during the previous year who were screened or tested for opioids, the number who screened or tested positive, the number treated by the facility, and the number on MAT for opioid use disorders. BJS hopes to continue to obtain this information on future iterations of the COJ.



National Emergency Medical Services Information System (NEMSIS): This national database is used to store EMS data from the U.S. States and Territories, with a universal standard for how patient care information resulting from prehospital EMS activations is collected. NEMSIS is a collaborative system to improve patient care through the standardization, aggregation, and utilization of point of care EMS data at a local, state, and national level.

National Forensic Laboratory Information System (NFLIS): DEA’s Diversion Control Division manages NFLIS, a database containing: data from nationwide forensic laboratories’ analyses of drug case evidence; and data from public and private toxicology laboratories from antemortem and postmortem drug testing.

National Seizure System (NSS): This system, managed by the DEA El Paso Intelligence Center, allows federal, state, local, and tribal law enforcement entities to submit data on illicit drug seizures around the country. Certain federal law enforcement agencies (DEA, FBI, CBP, ICE, and Coast Guard) are required to report drug seizures that surpass certain threshold levels but reporting by other law enforcement agencies is voluntary.

National Survey of Substance Abuse Treatment Services (N-SSATS)/National Substance Use and Mental Health Services Survey (N-SUMHSS): N-SSATS is an annual census of treatment facilities. Information is collected on the location, organization, structure, services, and utilization of substance abuse treatment facilities in the United States. N-SSATS was changed to include mental health facilities in 2021. The data are used for program administration and policy analysis.

National Survey on Drug Use and Health (NSDUH): NSDUH is an annual nationwide survey that provides national and state-level data on the use of tobacco, alcohol, illicit drugs (including non-medical use of prescription drugs) and mental health in the United States.

National Vital Statistics System, Mortality Data – Final or Provisional: Data releases and statistics on drug overdose, including provisional and final mortality data. CDC’s WONDER system allows users to create customized queries of provisional mortality data by multiple cause of death, demography, geography, and time. Final and provisional data are available with a 12-month and 6-month lags, respectively.

State Unintentional Drug Overdose Reporting System (SUDORS): Fatal overdose data are collected via the State Unintentional Drug Overdose Reporting System (SUDORS), which shares a web-based platform with the National Violent Death Reporting System (NVDRS). SUDORS captures data from death certificates, medical examiner/coroner reports, including detailed information on toxicology, death scene investigations, route of administration, and other risk factors that may be associated with a fatal overdose. Given the limitations with ICD cause of death codes, SUDORS data includes information from full postmortem toxicology testing results, which allows us to identify the specific substances that caused/contributed to the overdose death.

Theft Loss Reporting Database (TLR): This database contains a collection of information reported by registrants under regulatory requirements to report thefts and losses of controlled substances (21 CFR §§ 1301.74 and 1301.76).

Treatment Episode Data Set (TEDS): TEDS is an administrative data system providing descriptive information about the national flow of admissions to specialty providers of substance abuse treatment. It is a compilation of data on the demographic and substance abuse characteristics of admissions to (and more recently, on discharges from) substance abuse treatment. The data are routinely collected by State administrative systems and then submitted to the Substance Abuse and Mental Health Services Administration (SAMHSA) in a standard format.



APPENDIX D: DRUG CONTROL POLICY RELEVANT QUESTIONS FOR NATIONAL DRUG CONTROL POLICY AGENCIES

Pursuant to 21 U.S.C. § 1705(c)(1)(M), Appendix D contains a list of drug policy-relevant questions for which National Drug Control Program agencies intend to develop data and evidence to support the National Drug Control Strategy (Strategy). Appendix D includes a list of data sources, a list of methods and analytical approaches that agencies may use and a list of challenges to developing evidence needed to support the Strategy. As required by the SUPPORT Act, this section outlines the steps that National Drug Control Program agencies intend to take to leverage drug control data to support and improve evidence-based policymaking. The information contained in Appendix D was developed through a series of meetings of the Drug Data Interagency Working Group that were held throughout 2022.

List of Agency Drug Policy Questions

Agency	Title
ASPE1	Estimating SUD Treatment Need with Additional Data Sources
ASPE2	Outcomes among Medicaid Beneficiaries after a Behavioral Health EMS Encounter
ASPE3	Impact of Maternal Behavioral Health Treatment on Opioid-Exposed Infants and Children
ASPE4	Parental SUD Treatment and Child Welfare System Involvement
BJS1	Response of Local Jails to the Opioid Crisis
BJS2	Impact of U.S. Sentencing Policy on Drug Offenders in Federal Prison
BJS3	Characteristics of Persons Serving Sentences for Heroin or Opioid Offenses in Federal Prison
BOP1	Effectiveness of MAT from Beginning of Sentence Service through Return to the Community
BOP2	Improving Continuity of Care throughout Sentence Service
BOP3	Efficacy of MAT Therapies in the Carceral Setting
CDC/NCHS1	Tracking Drug Overdose Deaths from National Vital Statistics System Mortality Data
CDC/NCIPC1	Drug Overdose Surveillance and Epidemiology (DOSE)
CDC/NCIPC2	State Unintentional Drug Overdose Reporting System (SUDORS)
DEA1	Federal Law Enforcement Response and Collaboration



DHA1	Impact of Potential Federal Legalization of Cannabis on the DoD Response Capability
DHA2	Opioid Education and Naloxone Distribution Across the Military Health System
DIA1	Types and Quantity of Drug Threats to the United States
FDA1	Role of Prescribed Controlled Substances in Drug Use Trajectories and Related Harms
FDA2	Availability and Use of Falsified Pharmaceutical Products and Their Drug-Related Harms
FDA3	Improving Data on Overdose Reversal and Patient Outcomes
NHTSA1	Geographic Distribution of Nonfatal Opioid Overdoses
NIDA1	Nationally Representative Data of Nonfatal Overdoses
NIDA2	Improved Timeliness of Fatal and Nonfatal Overdose Data
NIDA3	Inclusion of Illicit Fentanyl in National Survey Data Collection
NIDA4	Estimating Need for Service Delivery
NIDA5	Wastewater-based Data on Regional Drug Prevalence and Emerging New Substances
NIJ1	Research and Development that Supports the Identification, Prevalence, and Reporting of Illicit Drugs
ONDCP1	Nonfatal Overdoses
ONDCP2	The Illicit Finance Network
ONDCP3	Expanding Access to Treatment
SAMHSA1	Perceived Barriers to Treatment
SAMHSA2	Protective Factors among Youth
SAMHSA3	Co-occurrence of Heavy Alcohol Use and Illicit Drug Use
SAMHSA4	Expanding Access to Treatment
VA1	Improving Patient Outcomes with Care Coordination/Linked Data
VA2	Community-Related Risk and Protective Factors to Improve Public Health Response



Contributing Agencies

ASPE	Office of the Assistant Secretary for Planning and Evaluation (Department of Health and Human Services)
BJS	Bureau of Justice Statistics (bureau under the Office of Justice Programs, agency of the Department of Justice)
BOP	Federal Bureau of Prisons (agency of the Department of Justice)
CDC/NCHS	National Center for Health Statistics (center under the Centers for Disease Control and Prevention, agency of the Department of Health and Human Services)
CDC/NCIPC	National Center for Injury Prevention and Control (center under the Centers for Disease Control and Prevention, agency of the Department of Health and Human Services)
DEA	Drug Enforcement Administration (agency of the Department of Justice)
DHA	Defense Health Agency (agency of the Department of Defense)
DIA	Defense Intelligence Agency (agency of the Department of Defense)
FDA	Food and Drug Administration (agency of the Department of Health and Human Services)
NHTSA	National Highway Traffic Safety Administration (agency of the Department of Transportation)
NIDA	National Institute on Drug Abuse (institute under the National Institutes of Health, agency of the Department of Health and Human Services)
NIJ	National Institute of Justice (institute under the Office of Justice Programs, agency of the Department of Justice)
ONDCP	Office of National Drug Control Policy (office under the Executive Office of the President)
SAMHSA	Substance Abuse and Mental Health Services Administration (agency of the Department of Health and Human Services)
VA	Department of Veterans Affairs



ASPE1 Estimating SUD Treatment Need with Additional Data Sources

Policy Question

- What is the distribution of SUD treatment needs in the United States by level of care? How does it match community resources

Data

- State assessment databases.
- Medicaid claims data

Methods/Analytical Approach

- Interview states to see if any have usable, valid data. Priority given to states that can link assessment data to Medicaid claims data.
- Use descriptive statistics to document the distribution of level of need, the percentage of individuals who do not go to the recommended level of care, and the reasons for the discrepancy.

Challenges

- Identifying states with valid data.

Steps

- Utilizing previous work reach out to promising states.
- Identify states with valid data.
- Execute data use agreements
- Conduct linkages and create descriptive statistics with partner states.

Rationale/Why is this important for drug strategy or program?

- To complement self-reported and administrative sources of drug consumption data
- To provide a finer grid on NSDUH data to describe level of need in the population



ASPE2 Outcomes among Medicaid Beneficiaries after a Behavioral Health EMS Encounter

Policy Question

- What are the outcomes of Medicaid beneficiaries after an EMS encounter for a behavioral health emergency (including nonfatal drug overdose)?

Data

- EMS data
- Medicaid claims data

Methods/Analytical Approach

- Link EMS electronic patient care reports and Medicaid claims from up to 5 states for the years 2018-2020
- Conduct statistical analysis to understand the relationship between EMS delivery, covariates, and outcomes

Challenges

- There are a limited number of states with high-quality EMS and Medicaid data
- It may be difficult to get states to agree to provide personally-identifiable information, which is necessary for linkage

Steps

- Identify states with high-quality data
- Execute data use agreements
- Link records to create the Multistate EMS and Medicaid Dataset (MEMD)
- Conduct statistical analyses
- Make MEMD available to the public

Rationale/Why is this important for drug strategy or program?

- To understand the trajectories of individuals following a nonfatal drug overdose



ASPE3 Impact of Maternal Behavioral Health Treatment on Opioid-Exposed Infants and Children

Policy Question

- How does receipt of behavioral health treatment prenatally impact neurodevelopmental outcomes and health services use in infants and children with prenatal opioid exposure?

Data

- linked mother-child claims
- Marketscan database

Methods/Analytical Approach

- Data analysis

Challenges

- Define prenatal opioid use measures that impact infant and child health outcomes

Steps

- Conduct literature review and identify gaps
- Finalize analytic plan and measures
- Conduct linkages and execute data analysis
- Analyze findings and publish results

Rationale/Why is this important for drug strategy or program

- Treatment issues among peripartum and postpartum women and children affected by parental use of opioids



ASPE4 Parental SUD Treatment and Child Welfare System Involvement

Policy Question

- How does access to SUD treatment predict child maltreatment, child welfare system involvement, and related outcomes?
- What interventions incorporating substance use treatment are most effective in reducing child maltreatment and child welfare system involvement, and improving child welfare and well-being outcomes for children and families involved in child welfare systems due to parental substance use?

Data

- Linked records between data systems for child welfare, substance use treatment, and Medicaid

Methods/Analytical Approach

- Development of longitudinal research-use data files linking case-level records for children and parents, across multiple systems (child welfare, Medicaid, hospitals, SUD treatment).
- Descriptive analysis of trends in receipt of services and associations with child welfare measures
- Case-control studies assessing receipt of different SUD services, particularly for sub-groups (including by race-ethnicity, urbanicity, child age, type of maltreatment)

Challenges

- Availability of data across systems, ability to link records and concerns over privacy

Steps

- Establish data use agreements between systems
- Prepare datasets for analysis
- Conduct analysis and document outcomes
- Develop and implement approach for sustainability of data linking over time

Rationale/Why is this important for drug strategy or program

- To identify effective approaches to reducing effect of SUD on child wellbeing
- To identify effective approaches to supporting parents suffering SUD and reducing risk of child maltreatment and child welfare system involvement



BJS1: Response of Local Jails to the Opioid Crisis

Policy Question

- How have local jails responded to the opioid crisis?

Data

- Annual Survey of Jails/Census of Local Jails

Methods/Analytical Approach

- Analyze data on screening for opioids at admission, treatment (including medication-assisted) and education during custody, and community linkage to treatment upon release from jail.

Challenges

- Approximately 6% of jails did not respond to questions on opioids; this required imputation of admission counts to get a national rate of positive screens at admission to jail.
- Some inconsistencies in responses that were not followed up at the time of the survey.

Steps

- Analyze and publish Census of Local Jails data in BJS report.
- Compare jails by size of average daily population, rural versus urban, region.
- Compare jail admission opioid screening rates to general population opioid overdose death rates by state.
- Consider repeating (with some revisions) questions on the next Census of Local Jails (2024) to start a time series.

Rationale/Why is this important for drug strategy or program?

- Local jails have the potential to identify and treat cases of opioid addiction or overdose for a portion of the community, as well as provide education and linkage to care for released inmates.
- The median time served in jail before a drug overdose death is one day. Increased screening for opioid use might allow for more oversight and fewer deaths in custody.



BJS2: Impact of U.S. Sentencing Policy on Drug Offenders in Federal Prison

Policy Question

- How do recent changes in U.S. sentencing policy impact the size and characteristics of persons sentenced to serve time in federal prison for drug offenses?

Data

- U.S. Sentencing Commission (USSC) sentencing records linked to Bureau of Prisons (BOP) population data

Methods/Analytical Approach

- Link records of persons who received a U.S. district court commitment sentence for a drug offense and in the custody of the BOP at the end of fiscal year 2013-2018, to their USSC records between FY 1994 and FY 2018.

Challenges

- 2-3% of BOP prisoners could not be linked to sentencing records.

Steps

- For each fiscal year 2013-2018, link records of persons in BOP custody at yearend to their USSC sentencing records and isolate those persons whose most serious offense was a drug offense.
- Examine over the 6-year period the age, sex, race/ethnicity, drug type, criminal history, time served, sentence length, mitigating circumstances considered during sentencing and whether a mandatory minimum sentence for drug offenses was applied per USSC for persons in BOP custody for drug offenses.
- Consider whether results are consistent with the expectations of recent drug offense sentencing policy changes.

Rationale/Why is this important for drug strategy or program?

- Almost half of all persons in the custody of the federal prison system are serving time for drug offenses. Until recently, the BOP population grew rapidly, due to increased admissions and longer times served by persons in prison.
- Sentences for drug offenses vary by drug type, mitigating circumstances, and whether or not the USSC has adopted a mandatory minimum sentencing policy for the specific drug offense.
- Policies enacted since 2012 have attempted to standardize sentencing practices for powder and crack cocaine offenses, and modify drug trafficking sentences to reduce the amount of time to be served. This study will determine whether these policies have been effective in reducing time served and the number of persons in federal prison for drug offenses.



BJS3: Characteristics of Persons Serving Sentences for Heroin or Opioid Offenses in Federal Prison

Policy Question

- What are the characteristics of persons who are serving sentences in the federal prison system for heroin or opioid offenses?

Data

- Federal Justice Statistics program data - linked arrest, court, conviction, sentencing, and prison records

Methods/Analytical Approach

- Examine how persons sentenced to serve time in the BOP for drug offenses involving opioids or heroin have changed in terms of demographic and criminal justice characteristics over time as the use of these two drug types has grown in the U.S.

Challenges

- 2-3% of BOP prisoners could not be linked to sentencing records.
- Small cell sizes may require redaction of results for certain less populated subgroups

Steps

- For each fiscal year, link records of persons in BOP custody at yearend to their U.S. Marshals' or other arrest records, court documents from the Administrative Office of U.S. Courts or Executive Office for U.S. Attorneys, and USSC sentencing.
- Limit the initial analysis to those persons in BOP custody whose most serious offense is a drug crime involving heroin or opioids. Using a 10 year window, examine whether there have been changes in the persons sentenced for heroin or opioid-related drug offenses, including age, sex, race/ethnicity, drug type, criminal history, time served, sentence length, mitigating circumstances considered during sentencing and whether a mandatory minimum sentence for drug offenses was applied.
- Compare persons in federal prison for offenses involving heroin or opioids with those serving sentences for powder or crack cocaine at each step of the criminal justice process (arrest, court filing, conviction, sentencing, prison term).

Rationale/Why is this important for drug strategy or program?

- While powder and crack cocaine remain the most common drugs for which people are sentenced to serve time in federal prison, the percentage of persons sentenced for drug offenses involving heroin and opioids has increased over time. It is important for the federal criminal justice system to understand this growing population and how it differs in demographic, criminal justice, sentencing, and judicial processing from those sentenced for other drugs.



BOP1 Effectiveness of MAT from Beginning of Sentence Service through Return to the Community

Policy Question

- How effective is medication assisted treatment (MAT), including naloxone use and distribution, in controlling patient symptoms and quality of life from beginning of sentence service through release/return to the community?

Data

- Statistics from electronic health record (EHR)
- Decrease in symptomology across the medical/mental health spectrum
- Patient survey/assessment
- Others to be determined

Methods/Analytical Approach

- Analyze available data resources to detect patterns of treatment engagement
- Use of a validated survey metric to assess symptom control and ongoing risk of return to use

Challenges

- Lack of enterprise data analytics system
- Establishing key data points to implement/enhance data collection within existing EHR
- Medication titration to achieve therapeutic goals in high-risk population while balancing security challenges such as diversion

Steps

- Review available data sources
- Evaluate data results to guide planning and enhancements needs
- Implement enhancements if needed to enable additional analyses
- Pursue enterprise data solution agency wide

Rationale/Why is this important for drug strategy or program?

- Leads to service delivery enhancements to improve patient outcomes
- Enables accurate response to external stakeholders
- Ability for agency assessment of service delivery



BOP2 Improving Continuity of Care throughout Sentence Service

Policy Question

- How can continuity of care be improved throughout sentence service, from continuation of MAT upon incarceration or initiation of MAT during sentence, to release/reintegration into community settings?

Data

- Statistics from electronic health record (EHR)
- Pre-sentence and designation health records
- Integration of medical/financial data sources
- Release planning data
- Contract service providers associated with Residential Reentry Centers
- Patient survey

Methods/Analytical Approach

- Analyze available data resources to detect patterns

Challenges

- Lack of enterprise data analytics system
- Lack access to service providers/health records prior to incarceration; no centralized repository of MAT community provider records for treatment verification
- Establishing key data points to implement/enhance data collection within existing EHR

Steps

- Review available data sources
- Evaluate data results to guide planning and enhancements needs
- Implement enhancements if needed to enable additional analyses
- Mitigate identified continuity of care gaps if applicable

Rationale/Why is this important for drug strategy or program?

- MAT is often a life-long therapy to treat substance use disorders (DOJ edit). Continuing therapy or starting therapy when clinically indicated are life-saving interventions and constitute medically necessary care
- Enhances and supports community reintegration
- Appropriate continuity without gaps in service reduces risk and incidence of overdose and return to use.
- Maximize cost avoidance/savings



BOP3 Efficacy of MAT in the Carceral Setting

Policy Question

- In the carceral setting, what is the relative efficacy of MAT in the treatment of opioid use disorders?

Data

- Statistics from electronic health record (EHR)
- Changes in symptomology across the medical/mental health spectrum
- Patient survey/assessment
- Comparison of overdose deaths or nonfatal overdoses between MAT patients and inmates who are not engaged in MAT.
- Measures of institutional adjustment
- Others to be determined

Methods/Analytical Approach

- Analyze available data resources to detect patterns of treatment engagement

Challenges

- Lack of enterprise data analytics system
- Establishing key data points to implement/enhance data collection within existing EHR

Steps

- Review available data sources
- Evaluate data results to guide planning and enhancements needs
- Implement enhancements if needed to enable additional analyses
- Pursue enterprise data solution agency wide

Rationale/Why is this important for drug strategy or program?

- Evaluate components of MAT, including psychosocial interventions
- Identify unique treatments needs of a carceral population



CDC/NCHS1 Tracking Drug Overdose Deaths from National Vital Statistics System Mortality Data

Policy Question

- How do rates of drug overdose death change over time and place?

Data

- Vital statistics mortality data are a fundamental source of demographic, geographic, and cause-of-death information in the United States. The data are used to present characteristics of those dying in the United States, to understand causes of death, to determine life expectancy, and to compare mortality trends with those in other countries. Information are collected from death certificates, which are completed by funeral directors, attending physicians, medical examiners, and coroners, with causes of death processed in accordance with the International Classification of Diseases, Tenth Revision. Data are available include demographic, geographic, underlying cause of death and multiple causes of death.

Methods/Analytical Approach

- Final Mortality data is available as a microdata file (https://www.cdc.gov/nchs/nvss/dvs_data_release.htm) and analytical approaches vary, available with a 1-year lag.
- Provisional Mortality Data available via CDC WONDER system allows users to create customized queries of provisional mortality data by multiple cause of death, demography, geography, and time. Provisional data for drug overdose deaths are available with a 6-month lag.

Challenges

- Several factors related to death investigation and reporting may affect measurement of death rates involving specific drugs. At autopsy, the substances tested for and the circumstances under which the toxicology tests are performed vary by jurisdiction.

Steps

- Working to address challenges that medical examiners and coroners face will improve the drug overdose deaths challenges.
- Data modernization, including the National Vital Statistics Data Modernization (See <https://www.cdc.gov/nchs/nvss/modernization.htm>) and the Medicolegal Death Investigation Data Modernization Initiatives.

Rationale/Why is this important for drug strategy or program?

- In addition to the information provided in the policy summary, the NVSS provides other views into the provisional and final annual mortality data. Drug overdose releases and statistics from the CDC-National Center for Health Statistics, including:
 - **Final Mortality data for 2020** were released in December 2021, available at <https://wonder.cdc.gov/wonder/help/mcd-expanded.html>
 - **CDC's Provisional Mortality Data available via CDC WONDER** system allows users to create customized queries of provisional mortality data by multiple cause of death, demography, geography, and time. Data for drug overdose deaths are available with a 6-month lag. Provisional WONDER was launched in December 2021 and is updated monthly. <https://wonder.cdc.gov/mcd-icd10-provisional.html>
 - Suite of provisional drug overdose death data available at: <https://www.cdc.gov/nchs/nvss/vsrr/provisional-drug-overdose.htm>



CDC/NCIPC1 Drug Overdose Surveillance and Epidemiology (DOSE)

Policy Question

- The CDC's Drug Overdose Surveillance and Epidemiology (DOSE) system was developed to monitor nonfatal drug overdoses trends by analyzing electronic health record (EHR) data to rapidly identify outbreaks and provide situational awareness of changes in drug overdose-related emergency department (ED) visits at the local, state, and regional level to inform programmatic directions and scale

Data

- Two data sources analyzed separately:
 - discharge/billing data captured by hospital associations - most use the standard uniform billing (UB-04) formats developed by National Uniform Billing Committee and the American Hospital Association with a 3.5-month time lag, submitted by 25 states
 - timely *syndromic data* captured by health departments - rely mostly on unstandardized text such as chief complaint (i.e., purpose of the visit), clinical impression (i.e., healthcare professional's assessment), and triage notes (i.e., additional context provided by the patient, law enforcement, emergency medical services, or patient's family/friends; may not represent final clinical diagnoses, but are captured in near real-time - oftentimes chief complaint text is transmitted from EHRs to local surveillance systems within 24–48 hours of a visit from 43 states submitting data from over 1,600 emergency department facilities.

Methods/Analytical Approach

- aggregate counts

Challenges

- While syndromic data can be useful for understanding national, regional, and state-level trends (including identifying spikes and clusters) in overdose in near real-time, there are trade-offs, including:
 - syndromic data is more timely than discharge data s in guiding outbreak and response efforts
 - discharge data often are considered the most reliable to assist in estimating disease burden because of the standardized coding scheme with confirmed clinical diagnoses (and syndromic doesn't have this).
- Syndromic data often rely on patient self-reporting and clinical judgment absent laboratory findings at ED intake
- Toxicology screens completed in EDs are limited and rarely completed in time for clinical treatment decisions.
- Syndrome definitions may underestimate or overestimate overdoses due to coding differences in hospitals, availability of diagnosis codes, and variable quality of chief complaint text.
- Neither the syndromic nor the discharge data captured can provide national counts (census) of overdose-related ED visits; and most states are not full coverage in either data source. For these reasons, these data are limited in their ability to assess national burden.
- These data are not data abstraction of medical records like DAWN or NEISS-AIP. With this additional manual review and coding, it may be likely that more cases are identified.
- These data cannot be linked to other records or used for longitudinal tracking of persons.
- Important segments of the population that were treated in the field (e.g., bystander, first responder/EMS) and not transported to an ED are still missing.
- CDC does not own the data collected by states and enters into direct agreement with states for data access. Current data sharing agreements are limited to the aggregate count data described above, and thus line-level data are not available for sharing with external entities for linkage purposes.

Steps

- CDC will continue to expand surveillance system to the 3 remaining states that do not currently participate and explore new drug indicators including overdoses involving fentanyl, cocaine, methamphetamines, or benzodiazepines.

Rationale/Why is this important for drug strategy or program?

- Both nonfatal and fatal drug overdoses have increased significantly over the past decade. To combat this epidemic, the Centers for Disease Control and Prevention (CDC) implemented the Overdose Data to Action (OD2A; <https://www.cdc.gov/drugoverdose/od2a/index.html>) program, which funds health departments to obtain high quality, more comprehensive, and timelier overdose data to inform prevention and response efforts. CDC's DOSE system funded under OD2A was developed to monitor nonfatal drug overdoses because for every drug overdose that results in death, there are many more nonfatal overdoses. DOSE has focused on leveraging EHR data (both syndromic and discharge) from EDs. Accurately describing and monitoring trends in nonfatal overdoses using injury surveillance data is necessary to track spikes and decreases in nonfatal overdoses (syndromic data) and for development and evaluation of prevention and response efforts (discharge data). For example, a major pillar of the CDC's overdose response is linkage to care, specifically treatment for opioid use disorder. Persons presenting at an ED for a drug overdose can be screened at intake and referred for subsequent treatment, or medications for opioid use disorder (MOUD) can be initiated in the ED setting.



CDC/NCIPC2 State Unintentional Drug Overdose Reporting System (SUDORS)

Policy Question

- As the worsening and expanding drug overdose epidemic in the United States involves potent synthetic opioids, often in combination with other drugs, timely and comprehensive surveillance and evidence-based prevention and response strategies remain essential.

Data

- These data are collected via the State Unintentional Drug Overdose Reporting System (SUDORS), which shares a web-based platform with the National Violent Death Reporting System (NVDRS). SUDORS captures data from death certificates, medical examiner/coroner reports, including detailed information on toxicology, death scene investigations, route of administration, and other risk factors that may be associated with a fatal overdose. Given the limitations with ICD cause of death codes, SUDORS data includes information from full postmortem toxicology testing results, which allows us to identify the specific substances that caused/contributed to the overdose death.

Methods/Analytical Approach

- Jurisdictions abstract data from death certificates and medical examiner/coroner reports, including death scene investigation findings and all drugs detected by postmortem toxicology testing. Detected drugs were classified as involved in (i.e., contributing to) overdose deaths if the medical examiner/coroner listed them as causing death on the death certificate or in the medical examiner/coroner report.

Challenges

- While SUDORS covers the majority of states, it does not have national coverage.
- Toxicology testing and drug involvement determination varies over time and across jurisdictions.
- Circumstance information (e.g., route of administration, was a bystander present, naloxone administration) are based on information contained in the medical examiner/coroner report and are likely underestimates due to varied drug overdose death investigation practices.

Steps

- Agency will continue to expand surveillance system to all states, improve timeliness of data submission, and explore outcomes associated with contextual information related to social determinants of health.

Rationale/Why is this important for drug strategy or program?

- The overall goals of SUDORS are: 1) to better understand the circumstances that surround overdose deaths, 2) to improve overdose data timeliness and accuracy, and 3) to identify specific substances causing or contributing to overdose deaths as well as emerging and polysubstance overdose trends to help inform overdose prevention and response efforts. SUDORS narratives provide the who, what, where, when, and why of the overdose death, providing context surrounding the overdose death.
- SUDORS data can capture newly emerging drugs as well as information on specific drugs rather than just drug classes (e.g., methamphetamine rather than psychostimulants with abuse potential). Additionally, the SUDORS system is flexible, allowing for new drugs to be added in real-time as SUDORS staff identify them on toxicology reports. Finally, data on circumstances and scene evidence provide the context surrounding the overdose death (e.g., medical history, substance use treatment history, and criminal justice involvement, whether naloxone was administered).



DEA1 Federal Law Enforcement Response and Collaboration

Policy Question

- How are federal law enforcement agencies responding through enforcement to overdose hotspots, as they define it and as real-time as possible?
- How do federal law enforcement agencies collaborate and share information with public health agencies?
- How do federal law enforcement agencies apply evidence-based approaches/methods to address demand prevention/reduction?

Data

- National Seizure System (NSS)
- National Forensic Laboratory Information System (NFLIS)
- Automated Reports and Consolidated Ordering System (ARCOS)
- Theft Loss Reporting Database (TLR)
- System to Retrieve Information from Drug Evidence (STRIDE)

Methods/Analytical Approach

- Share methods and analytical approaches with National Drug Control partners
- Analyze and aggregate data available data resources to detect trends
- Create a workflow to ingest federal, state, and local partner data into a visualization tool
- Geo-enable data sources to enrich analysis

Challenges

- Ingesting, processing, and aggregating federal, state, local data sources
- Authorize, assess and identify data sets in order to break silos
- Establishing automated data processing in order to meet the mission
- Supporting federal, state, and local partners with data standardization

Steps

- Continue to invest in a mission driven, threat driven, and data driven training to empower workforce;
- Establishing data governance standards to facilitate timely and actionable insight;
- Pursue rapid deployment of IT data enterprise level solutions; and
- Leverage all existing data and IT resources.

Rationale/Why is this important for drug strategy or program?

- There were 107,622 overdose poisonings in the United States last year, largely as a result of fentanyl. Two Mexican cartels, Sinaloa and CJNG, are responsible for the overwhelming majority of fentanyl trafficked to communities. Defeating these two cartels is DEA's top priority; utilizing data will empower DEA personnel to address rapidly evolving threats of these cartels and achieve operational success.



DHA1/OFR (Office of Force Resiliency) Impact of Potential Federal Legalization of Cannabis on the DoD Response Capability

Policy Question

- What would be the impact of potential federal legalization of cannabis on the department of defense? What would be the optimal response to minimize impact on capability to respond to demands of future conflicts?

Data

- [to be determined]

Methods/Analytical Approach

- Determine the response from other militaries to legalization of cannabinoids
- Monitor the impact of these policies on retention and fitness
- Monitor potential emerging changes in lab testing that would impact utilization monitoring or policy enforcement

Challenges

- Identify countries with legal cannabis willing to share policy and impact data.
- Lack of countries with directly analogous cannabinoid policy
- Current urine and blood testing capabilities limited in ability to correlate positive testing with acute intoxication
- Limited quality studies of associating chronic use and effect on tasks required of service members
- Wide variety of capabilities with potential to be impacted
- Emerging nature of data available

Steps

- Identify other counties with legalized cannabis
- Identify potential range of policies regarding cannabis use available to department of defense
- Identify response by the militaries of these countries to restrict or monitor the use of cannabinoids, including testing and education
- Monitor impact of policies on retention and fitness
- Identify sources and methods to monitor the effects on fitness and retention
- Establish systems to monitor potentially impactful developments in drug testing
- Understand relationship between MORE Act and UCMJ

Rationale/Why is this important for drug strategy or program?

- The legalization of cannabis by an increasing number of states raises the possibility of federal legalization. Impact on the DoD has been limited to this point by cannabis remaining illegal under federal law.
- Potential federal legalization could potentially have significant impacts on DoD capability to respond to future conflicts
- Currently utilized drug testing is limited in its ability to identify acute intoxication with cannabis, which limits policy enforcement. An understanding of the capabilities and limits of current testing is essential to crafting effective policy.
- Effective, pro-active policy will be required to minimize the impact of potential federal legalization on capability to respond to future conflicts



DHA2 Opioid Education and Naloxone Distribution Across the Military Health System

Policy Question

- Opioid Education and Naloxone Distribution across the Military Health System.

Data

- Includes all members enrolled to Tricare Prime or Plus during the measurement month. Sources: DEERS, PDTS (Pharmacy Data Transaction System), Designated Provider Pharmacy Data, Standardized Inpatient Data record, Designated Provider Claims, Purchases Care Professional Claims Data. Data displayed on the VALUE and R&A dashboards.

Methods/Analytical Approach

- Identify enrollees who meet criteria for “elevated risk”. The elevated risk population includes patients meeting criteria for **any** of the following four categories in the measurement month:
 - (1) RIOSORD > 32- (**R**isk **I**ndex for **O**verdose or **S**erious **O**pioid-Induced **R**espiratory **D**epression)
 - (2) Long Term Opioid Therapy (LOT)- (members who had 90 days of opioid therapy within a 180 day period that ended on any day of the measurement month)
 - (3) Concomitant Opioid/Benzodiazepine therapy- (includes any 1 day overlap)
 - (4) MEDD >= 50- (**M**orphine **E**quivalent **D**aily **D**ose)

Challenges

- Lack of centralized education program for providers/prescribers
- Perceived stigma by patients
- Lack of standardized practice recommendation.

Steps

- Following are running concurrently:
 - Identify and engage Market POCs
 - Provide OEND Train-the-Trainer program training
 - Create and disseminate practice recommendation (CDC and DoDVA CPGs, DHA-PIs)
 - Refresh social media campaign for both providers and patients.

Rationale/Why is this important for drug strategy or program?

- Dispensing naloxone, the opioid overdose reversal drug, in conjunction with opioid overdose education is one of the five pillars of the U.S. Department of Health and Human Services’ (HHS) comprehensive, science-based strategy to address the nation’s opioid epidemic.
- Medical evidence demonstrates that naloxone saves lives and should be prescribed to all patients at risk for opioid complications, including overdose.
- Measuring the rate of naloxone prescribing to individuals at elevated risk for overdose is an indicator of MHS provider risk mitigation behavior.
- Naloxone prescribing/distribution is life-saving and recommended as part of the CDC and DoD/VA opioid-related Clinical Practice Guidelines, as well as two DHA-PIs (6025.04 and 6025.07). DHA-PIs 6025.04 and 6025.07 provide recommendations for co-prescribing of naloxone for those individuals identified as at elevated risk for opioid complications such as overdose.
- Measuring the rate at which individuals identified as at elevated risk are co-prescribed naloxone supports MHS Review recommendation to manage and track compliance of the Services and DHA with applicable DoD policies and directives.



DIA1 Types and Quantity of Drug Threats to the United States

Policy Question

- What types and how much of drugs are a threat to the United States and its foreign partners?

Data

- Consolidated Counterdrug Database

Methods/Analytical Approach

- Discover and maintain new sources of data

Challenges

- Finding and maintaining unique or new sources of data

Steps

- Examine current sources of data
- Identify gaps
- Find new sources of data
- Incorporate new sources into database ingestion workflow
- Automate ingestion if possible

Rationale/Why is this important for drug strategy or program?

- To provide the most accurate estimate of the drug threat to the United States and its counterdrug interests internationally



FDA1 Role of Prescribed Controlled Substances in Drug Use Trajectories and Related Harms

Policy Question

- In the current environment where illicit substances are easily accessible and highly lethal, how do prescribed controlled substances (e.g., opioid analgesics, benzodiazepines, stimulants) fit into drug use trajectories and how are these drugs now contributing to the development of OUD/SUD and related harms (e.g., overdose, infections)?

Data

- Novel prospective longitudinal cohort data in a demographically and geographically diverse sample enriched with individuals at elevated risk of developing these outcomes

Methods/Analytical Approach

- Determine feasibility of conducting longitudinal follow-up of cross-sectional online panel surveys, including development and assessment of recruitment and retention strategies using mobile technologies. Explore enhanced linkages of existing national surveys to outcomes databases (e.g., electronic healthcare data, SUD treatment data, mortality records)

Challenges

- Unknown retention rates and potential for bias due to non-random loss to follow-up
- Need to develop/validate modular survey instruments, high cost, time intensive

Steps

- Fund foundational work (e.g., survey module validation, assess online recruitment/retention strategies) and pilot/feasibility studies; assess agency interest and explore joint funding for ongoing full prospective study

Rationale/Why is this important for drug strategy or program?

- The trajectories and influences of adult drug use across different drug classes from initiation through serious medical consequences, including fatal overdose, is not currently well understood. This understanding is critical to designing effective interventions. Existing cross-sectional data do not allow for robust evaluation of temporal or causal relationships, and most longitudinal data currently available (e.g., administrative claims) do not adequately capture diverse exposures and outcomes like SUD/OUD, criminal justice involvement, and other harms. Prospective data collection using online platforms can be adapted as new problems/questions emerge to understand how individuals adapt to a changing environment.



FDA2 Availability and Use of Falsified Pharmaceutical Products and Their Drug-Related Harms

Policy Question

- Characterize and monitor the scope, patterns and trends in availability and use of falsified pharmaceutical products (e.g., fake/counterfeit/pressed oxycodone, Xanax, Adderall) and other unapproved substances (e.g., “designer” drugs, psychedelics, cannabis-derived products/botanicals), awareness and perceptions of these products in different populations, and the contribution of these products to drug-related harms in the U.S.

Data

- Novel surveys in diverse populations, including general populations and enriched populations of individuals entering or being assessed for SUD treatment; improved data collection on involvement of fake/pressed pills in drug seizures, law enforcement cases, and nonfatal and fatal overdoses; centralizing/aggregating data generated through community drug checking services, other TBD

Methods/Analytical Approach

- Develop/validate new questions to be deployed in existing surveys (and ideally in longitudinal follow-up) to examine awareness and perceived risks of, motivations and sources for, and experiences (including harms) with falsified/counterfeit pharmaceutical products and unapproved substances; consider adding new standard data elements to overdose surveillance systems (e.g., SUDORS) and other databases (e.g., NFLIS)

Challenges

- “Fake” drugs are increasingly difficult to distinguish from legitimate products, and individuals may not be aware of the composition of drugs they buy and use; comprehensive toxicology testing is not routine in clinical/nonfatal overdose cases; standard documentation for drug-involved overdose deaths does not include information on involvement of fake products

Steps

- Initiate multi-pronged collaborative activities described in Methods/Analytical Approach

Rationale/Why is this important for drug strategy or program?

- Despite evidence that falsified/counterfeit and unapproved drug products play a growing role in patterns of drug use and adverse outcomes, national surveillance systems are not sufficiently agile or timely to address the many emerging questions about these drugs, the answers to which will inform policies/regulation, educational, and other interventions.



FDA3 Improving Data on Overdose Reversal and Patient Outcomes

Policy Question

- Improving real-world data on overdose reversal in the fentanyl and polysubstance phase of the overdose crisis. Better data are needed to understand frequency (i.e., how many overdose reversals are occurring), setting, timing of naloxone administration, responding persons (e.g., lay bystander, EMS, law enforcement) and their training/experience, source of naloxone (e.g., prescription/pharmacy, harm reduction program, EMS), dose/formulation, medication errors, substances involved in the overdose, other resuscitative efforts, and patient outcomes (e.g., recovery, precipitated withdrawal, death)

Data

- National EMS data (NEMSIS), data routinely collected by community harm reduction programs, key informant interviews, other TBD

Methods/Analytical Approach

- Multiple—retrospective analysis of existing national data (NEMSIS), other data (e.g., data collected from harm reduction programs), supplemented with prospective, mixed-methods approaches

Challenges

- No single data source has the capability to fully characterize real-world use of naloxone in overdose cases. Often the actual substances involved in an overdose are not known.

Steps

- Refine research/regulatory questions, plan and conduct analyses using publicly available NEMSIS data, explore external research contracts for additional retrospective and prospective studies

Rationale/Why is this important for drug strategy or program?

- Overdose reversal, primarily involving naloxone, is a critical component of harm reduction and addressing the overdose crisis; however, current data are limited on the real-world factors driving, or limiting, the effectiveness of this intervention. Better data are needed to understand gaps and determine the need for improved and/or novel approaches to overdose reversal in the current era.



NHTSA1 Geographic Distribution of Nonfatal Opioid Overdoses

Policy Question

- What is the current geographic distribution (and incidence) of nonfatal opioid overdoses across the U.S.?
- What regions/specific locations are facing the greatest concentration of nonfatal opioid overdose?

Data

- National Emergency Medical Services Information System (NEMSIS)

Methods/Analytical Approach

- Develop a dashboard, updated weekly, that characterizes nonfatal opioid overdoses attended by EMS clinicians. Data should be current, with a 2-week lag, allowing clinicians to complete reporting.
- Track naloxone administrations per overdose patient.
- Track time from 911 call to scene treatment for overdose patients.
- Track percent of overdose patients transported to a medical facility.

Challenges

- States must provide permission to track nonfatal opioid overdoses by geographic region, using the National EMS registry.

Steps

- Work with State EMS officials to define a process for release of the incident location for all nonfatal opioid overdoses.
- Develop a dashboard, with guidance from the ONDCP, to focus on topics important to policy development.
- Work with States to reduce the lag time to complete reporting for all patient overdoses attended by EMS.
- Develop a process the weekly update and reporting of current nonfatal opioid overdoses by EMS agencies in all 50 States and three Territories.

Rationale/Why is this important for drug strategy or program?

- To target geographic regions in greatest need of intervention.
- Document the relationship between naloxone availability and overdose reversal.
- Identify geographic regions in greatest need of hospital and outpatient resources.



NIDA1 Nationally Representative Data of Nonfatal Overdoses

Policy Question

- What are the geographic and demographic U.S. trends of nonfatal drug overdose events and what drugs (including fentanyl) are involved?
- What characteristics are associated with nonfatal overdose?

Data

- Hospital discharge data
- CDC DOSE collects syndromic data via ICD-10 codes
- ODMAP captures nonfatal overdose events via reporting by first responders, hospitals

Methods/Analytical Approach

- Explore ways to Standardize data collection across state and local jurisdictions

Challenges

- Resource intensive at the local/state level
- ODMAP lacks a standardized method of data collection across states/jurisdictions
- State/local level participation in ODMAP is limited
- A limited number of states participate in CDC DOSE

Steps

- Rapid review of existing data from states and territorial jurisdictions
- Synthesize data from credible state-level sources to estimate a nationwide ratio of nonfatal to fatal OD
- Build demonstration projects with EHR by working with Health Information Exchanges
- Build the foundation for a multi-year, sustainable system for a national real-time nonfatal overdose tracking system

Rationale/Why is this important for drug strategy or program?

- To estimate linkage to care and service delivery needs
- To track persons through the healthcare system (or outside of the system), for example to plan and evaluate naloxone distribution programs and determine treatment needs
- To understand relationship with fatal overdose patterns



NIDA2 Improved Timeliness of Fatal and Nonfatal Overdose Data

Policy Question

- What is the real-time burden of fatal and nonfatal overdoses?

Data

- CDC WONDER
- ODMAP

Methods/Analytical Approach

- Identify resources to fund improvements in the data collection and reporting process
- Explore ways to standardize data collection and reporting across state and local jurisdictions
- Improve technologies and processes to expedite drug testing and reporting

Challenges

- There is a 5-month lag between data collection and (predicted) data reporting by the CDC; full reporting takes longer
- Data collection and reporting at the state and local level is not standardized
- Data cleaning/reporting is resource intensive
- ODMAP data collection is not reported by all local/state jurisdictions

Steps

- Assess technological testing and reporting needs of jurisdictions
- Explore a standardized reporting protocol

Rationale/Why is this important for drug strategy or program?

- To estimate significant trends, local and regional hotspots and identify emerging drugs
- To understand relationship with drug use patterns
- Identify which drugs are involved in overdose deaths
- Identify and target prevention, intervention, and treatment strategies



NIDA3 Inclusion of Illicit Fentanyl in National Survey Data Collection

Policy Question

- What is the extent of fentanyl contamination in the drug supply?
- Are people who use drugs aware that they are using fentanyl? Where in the drug distribution process is fentanyl being introduced into the drug supply (dealer vs. consumer)?
- What is the extent of fentanyl use, use disorder and treatment across the U.S.?
- What is the treatment need for fentanyl-specific OUD?

Data

- High Intensity Drug Trafficking Areas (HIDTA): Need to capture multiple drug-involvement/fentanyl contamination
- National Survey on Drug Use and Health (NSDUH): Need questions about fentanyl use and opioid use disorder specific to fentanyl.
- Treatment Episode Data Set (TEDS): Need to include questions to capture admissions for opioid use disorder involving fentanyl.

Methods/Analytical Approach

- Identify barriers to capturing fentanyl in combination with other drugs in seizure data
- Establish if current surveys can capture fentanyl use, treatment, etc. data
- Assess feasibility of capturing fentanyl in SAMHSA survey data: use/OUD specific to illicit fentanyl
- Conduct pilot studies to establish user awareness of fentanyl use

Challenges

- The only data source capturing fentanyl alone is seizure data. CDC WONDER allows for assessment of synthetic opioids other than methadone which is a category currently dominated by illicit fentanyl
- Questions added to surveys must be validated
- Clearance process to make changes to federally funded surveys

Steps

- Determine feasibility of drug testing process in HIDTA data: can multiple drugs be captured?
- Rapid review of existing data from States and territorial jurisdictions
- Leverage the public health emergency designation of the opioid crisis to facilitate changes to data systems

Rationale/Why is this important for drug strategy or program?

- Understand patterns of fentanyl adulteration in the drug supply to estimate use, prevention, intervention efforts
- To estimate service delivery needs
- Establish need for distribution/access to MOUD
- To understand relationship with fatal overdose patterns



NIDA4: Estimating Need for Service Delivery

Policy Question

- What is the extent of MOUD availability, access, and use in the U.S.?
- Including among vulnerable and difficult to reach populations (CJ, pregnant women, rural areas, homeless/unsheltered, IDU)?
- How are patients being retained in MOUD treatment? For how long?

Data

- CMS claims data
- State Prescription Drug Monitoring Program (PDMP) data
- IQVIA prescription data
- SAMHSA:
 - National Survey of Substance Abuse Treatment Services (N-SSATS): Include residence urbanization (rural or urban) of facility location
 - National Survey on Drug Use & Health (NSDUH): Add pregnancy status as a stratifying factor for the metric, "Received medication-assisted treatment (MAT)"
 - Treatment Episode Data Set (TEDS): Include data on residence urbanization of patient

Methods/Analytical Approach

- Evaluate current efforts and determine resources needed
- Establish if current surveys can capture additional data on pregnancy status, criminal justice involvement, and residence urbanization
- Perform a retrospective and/or prospective analysis of CMS medical billing data
- Analyze IQVIA's National Prescription Audit data, Longitudinal Prescription Claims data, Ambulatory EMR data, and other relevant data to determine receipt of and duration of prescriptions for MOUD and relation to other available health information
- Connect IQVIA data with other data sets to obtain a more complete longitudinal health profile of individuals and their treatment
- Evaluate states' PDMP data

Steps

- Rapid review of existing data from States and territorial jurisdictions
- Build demonstration projects with electronic health records by working with Health Information Exchanges
- Review compatibility and feasibility of connecting disparate data sets (IQVIA, CMS)
- Determine receipt of, and duration of prescriptions for MOUD?
- Identify variables affecting retention in MOUD treatment?
- Synthesize data from criminal justice settings reports and surveys to estimate the receipt of MOUD?

Rationale/Why is this important for drug strategy or program?

- To estimate service delivery needs
- Estimate needs for recovery services
- Identify factors that can improve treatment retention



NIDA5: Wastewater-based Data on Regional Drug Prevalence and Emerging New Substances

Policy Question

- What is the regional/geographic drug prevalence?
- What are the predominant drugs in regions/specific locations?
- What are the emerging drugs seen across the U.S. and surrounding areas?

Data

- NIDA-funded studies are collecting local wastewater-based data to survey local communities for opioid metabolites.

Methods/Analytical Approach

- Utilize wastewater-based epidemiology (WBE) data collection to regularly measure drug metabolites in local and regional areas in near-real-time
- Conduct pilot studies to establish data collection parameters and needed resources

Challenges

- Identification of a data collection agency to house a long-term sustained effort to measure drug metabolites in wastewater

Steps

- Review of global studies and any existing drug WBE work in the U.S., including use in related areas (such as COVID-19 monitoring)
- Build from pilot projects with local site(s) and potential data-collection partner(s)
- Build the foundation for a sustainable system for monitoring wastewater regularly and in near-real-time in geographically granular units

Rationale/Why is this important for drug strategy or program?

- To estimate regional variability in drug consumption based on quick and repeated measurement of biomarkers
- To identify local and regional hotspots and emerging drug threats
- To complement self-reported and administrative sources of drug consumption data
- To understand relationship with drug supply indicators and other drug patterns



NIJ1 Research and Development that Supports the Identification, Prevalence, and Reporting of Illicit Drugs

Policy Question

- How can the changing landscape (region, community, impact on mortality) of illicit drug use and prevalence, to include novel psychoactive substances (NPS), be better understood?

Data

- Research reports, publications, patents, datasets

Methods/Analytical Approach

- NIJ solicits forensic science research and development projects which enhance the detection and reporting of NPS and other illicit drugs.
- NIJ develops and publishes national best practices by assembling working groups of state, local, and Federal subject matter experts.

Challenges

- Although supported, NIJ has no dedicated resources for forensic science research.
- There are many competing R&D needs in the forensic sciences.
- Administrative priorities generally impact allocation of R&D resources.
- Federal, non-coordinated approaches can lead to fragmented solutions.
- Implementation of Illicit drug detection is highly dependent on the capabilities of forensic laboratories (seized drugs and forensic toxicology).
- Collaboration and communication of results among varied entities such as law enforcement, clinical labs, medical examiners, and forensic labs, as well as across Federal, state, and local jurisdictions is challenging and not supported.

Steps

- Reinforce current medicolegal death investigation working groups with NIJ's Forensic Technology Center of Excellence.
- Disseminate outputs from awards and working groups.
- Develop or modify future solicitations which specifically target improved detection, identification, and reporting of illicit drugs in both seized drugs and toxicology.
- Track outputs over time to describe or assess potential impact.

Rationale/Why is this important for drug strategy or program?

- To improve methods and technologies associated with the identification and reporting of NPS and other illicit drugs and trends over time.
- To evaluate technologies and protocols which may be adopted by toxicology and seized drug laboratories.
- To support the collection and reporting of accurate NPS and other illicit drug data which can describe prevalence and mortality impact of novel and existing illicit drugs on the US population.



ONDCP1 Nonfatal Overdoses

Policy Question

- What is the extent and distribution of nonfatal drug overdoses?

Data

- NHTSA/NEMSIS
- CDC-DOSE
- Other - some state- or local-level data

Methods/Analytical Approach

- Gather and triangulate currently available data sources on nonfatal overdose:

Challenges

- Identify a data-collection agency and resources to house the long-term sustained effort to track nonfatal overdoses

Steps

- Rapid review of existing data from States and territorial jurisdictions.
- Synthesize data from credible state-level sources to estimate a ratio of nonfatal to fatal overdoses for the U.S.
- Build demonstration projects with electronic health records by working with Health Information Exchanges.
- Build the foundation for a multi-year, sustainable system for a national real-time nonfatal overdose tracking system.

Rationale/Why is this important for drug strategy or program?

- To estimate service delivery needs.
- To track persons through the healthcare system (or outside of the system), for example to plan and evaluate naloxone distribution programs.
- To understand relationship with fatal overdose patterns.



ONDCP2 The Illicit Finance Network

Policy Question

- What is the nature and extent of the illicit finance network in the drug trade? Globally and locally?

Data

- [to be determined]

Methods/Analytical Approach

- Conduct pilot studies to establish data collection parameters and needed resources.

Challenges

- Identify a data-collection agency and resources to monitor and regularly compile information on illicit finance.

Steps

- Review available information on illicit finance.
- Identify sources and methods to continually update this information.
- Establish a data system that can capture the dynamic nature of illicit finance.

Rationale/Why is this important for drug strategy or program?

- To estimate the magnitude and adaptability of illicit finance networks that fuel the drug trade.
- To understand the relationship with drug supply indicators and other drug patterns.



ONDCP3 Expanding Access to Treatment

Policy Question

- What is the quality and extent of available treatment, including medication-assisted treatment?

Data

- TEDS, N-SSATS, other sources

Methods/Analytical Approach

- Examine existing treatment data and identify gaps.
- Potential for modeling work for different risk groups.
- Identify points of proactive contact with potential treatment populations for seeking, diagnosing, and treating SUD.

Challenges

- Timeliness is a major issue with existing data systems that rely on states reporting to SAMHSA in a timely manner.
- Need to distinguish between persons in treatment for the first time and those who are repeat admissions and avoid double-counting.
- Need to reduce racial inequalities in health care and in the criminal justice system that impact treatment.

Steps

- Review available data systems to pinpoint areas for potential improvement.
- Identify novel sources of information to supplement existing data systems, i.e., explore availability and use of electronic health records.
- Maintain a reporting system that can track data in near-real-time.
- Expand the ability to report on vulnerable and disadvantaged populations.

Rationale/Why is this important for drug strategy or program?

- To reduce barriers to treatment.
- To distinguish between different levels of care and ancillary services for different treatment subpopulations.
- To improve access to treatment.



SAMHSA1 Perceived Barriers to Treatment

Policy Question

- What are the barriers to accessing substance use treatment among people who perceive a need for it?

Data

- National Survey on Drug Use and Health (NSDUH)

Methods/Analytical Approach

- Concatenation of NSDUH data from 2015-2019.
- Examine barriers to treatment by sociodemographic characteristics.

Challenges

- Barriers to accessing care may change over time, especially given the COVID-19 pandemic.
- Multiple years of data are needed to examine barriers among many groups.
- Barriers may manifest as perception or assertion that care is not needed.

Steps

- Review available data to analyze overall prevalence of barriers among those who assert a need for treatment.
- Identify differences in barriers to treatment by sociodemographic groups.

Rationale/Why is this important for drug strategy or program?

- To improve access to treatment by diminishing/reducing barriers.
- Differences by sociodemographic characteristics may point to a need for more culturally appropriate and tailored substance use treatment programs, or for resources located in particular geographic areas.



SAMHSA2 Protective Factors among Youth

Policy Question

- What known protective factors are most associated with abstaining from illicit drug use among youth 12 -17?

Data

- National Survey on Drug Use and Health (NSDUH)

Methods/Analytical Approach

- Concatenation of NSDUH data from 2015-2019
- Examine associations between protective factors and past-month drug use

Challenges

- Available information on protective factors is limited to factors currently collected
- Multiple years of data are needed to examine factors for youth

Steps

- Analyze associations between protective factors and illicit drug use
- Identify differences in protective factors and illicit drug use by age group

Rationale/Why is this important for drug strategy or program?

- Knowing protective factors associated with abstaining from illicit drug use can guide prevention and intervention efforts among youth



SAMHSA3 Co-occurrence of Heavy Alcohol Use and Illicit Drug Use

Policy Question

- How is illicit drug use associated with heavy alcohol consumption?

Data

- National Survey on Drug Use and Health (NSDUH)

Methods/Analytical Approach

- Concatenation of NSDUH data from 2015-2019
- Examine co-occurrence of illicit drug use and heavy alcohol consumption
- Analyze differences by sociodemographic characteristics

Challenges

- Multiple years of data may be needed to examine uncommon drug types

Steps

- Review available data to analyze overall co-occurrence of illicit drug use and heavy alcohol consumption
- Identify differences by sociodemographic characteristics

Rationale/Why is this important for drug strategy or program?

- Identification of groups that may have a greater burden of co-occurring illicit drug and alcohol use
- Treatment services frequently focus on individuals with substance use disorders and gaps exist in early intervention programs



SAMHSA4: Expanding Access to Treatment

Policy Question

- What is the quality and extent of available treatment, including medication-assisted treatment?

Data

- TEDS, N-SSATS, other sources

Methods/Analytical Approach

- Examine existing treatment data and identify gaps.
- Potential for modeling work for different risk groups.
- Identify points of proactive contact with potential treatment populations for seeking, diagnosing, and treating substance use disorders.

Challenges

- Timeliness is a major issue with existing data systems that rely on states reporting to SAMHSA in a timely manner
- Need to distinguish between persons in treatment for the first time and those who are repeat admissions and avoid double-counting
- Need to reduce racial inequalities in health care and in the criminal justice system that impact treatment

Steps

- Review available data systems to pinpoint areas for potential improvement.
- Identify novel sources of information to supplement existing data systems, i.e., explore availability and use of electronic health records.
- Maintain a reporting system that can track data in near-real-time.
- Expand the ability to report on vulnerable and disadvantaged populations.

Rationale/Why is this important for drug strategy or program?

- To reduce barriers to treatment.
- To distinguish between different levels of care and ancillary services for different treatment subpopulations.
- To improve access to treatment.



VA1 Improving Patient Outcomes with Care Coordination/Linked Data

Policy Question

- Can patient safety and outcomes be improved by ensuring that clinical decision support and population management tools to address overdose risk, used in government run health care systems, incorporate data from shared patients receiving services across Government programs?

Data

- VHA Corporate Data Warehouse, including VISTA and Cerner Millennium based medical record data
- DOD MIPs, including DOD legacy medical record data
- DOD Cerner Genesis data
- CMS Medicare/Medicaid data
- Indian Health Service data

Methods/Analytical Approach

- Share and consolidate health care data at the patient level and use to:
 - Develop/recalibrate predictive models estimating risk of overdose
 - Incorporate data from all records into clinical decision support and population management tools designed to support treatment of patients on controlled substances or with substance use disorders

Challenges

- Establishing sharing agreements and data transmission methods to enable timely and regular transmission of needed data to VA and DOD, specifically for Cerner Genesis and CMS data. The other sharing is already occurring.

Steps

- This work is already underway, with sharing, modeling, and decision support implementation conducted for within VA and DOD to consolidate VHA Corporate Data Warehouse, including VISTA and Cerner Millennium based medical record data and DOD MIPs, including DOD legacy medical record data, into VA and DOD population management tools.
- Establish sharing agreements to allow Cerner Genesis and CMS data to be shared for operations use
- Establish secure data transmission methods to enable regular transmission of Cerner Genesis and CMS data to VA and DOD data warehouses.
- Recalibrate predictive models used in decision support to incorporate Cerner Genesis and CMS data.
- Merge new source data into decision support and population management tools used currently in VA and DOD clinical practice.

Rationale/Why is this important for drug strategy or program?

- Dual use of VHA and CMS programs has been shown to increase risk of medication-related errors and adverse events and DOD to VA servicemember transition has been identified as a high risk period for suicide, overdose and other mental health adverse events. Risk is associated with lack of care coordination and/or awareness of treatments provided outside the agency.
- A care coordination intervention within VHA reduced near term mortality of patients on opioid analgesics estimated to be at high risk of overdose/suicide by 23%.
- This project would provide clinicians with full knowledge of treatment provided and health history from across agencies, reducing risk of care gaps or mismatched treatments.



VA2 Community-Related Risk and Protective Factors to Improve Public Health Response

Policy Question

- Can understanding and planning to address community related risk and protective factors improve risk assessment and public health response?

Data

- Numerous publicly available sources (e.g. Currently tools to address risk focus solely on patient factors, not accounting for community impact. Developing models to understand the interplay between patient and community risk can improve health care outreach, and public health response.)
- However, this data is complex and tools to support identification of actionable insights are needed, if this data is going to improve drug strategy or program targeting.
- Curated geospatial data regarding community social and environmental determinants of health from:
 - Department of Energy Oakridge National Labs (ORNL)
 - AHRQ

Methods/Analytical Approach

- Examine the interplay between medical and community factors in predictive risk of overdose
- Improve drug surveillance by incorporating law enforcement (e.g. drug seizures) and medical data (e.g. urine drug screening results) to better estimate trends in drug availability and use in communities and populations
- Develop visualization and intervention targeting tools to support agencies in targeting public health interventions and initiatives to communities with relevant challenges

Challenges

- Identifying relevant end-users from each agency to inform design of visualization and targeting tools.
- Disseminating tools and training relevant end-users in use.
- Identifying a lead and stable funding for maintenance of visualization and intervention targeting tools.

Steps

- Current state: Both AHRQ and VHA Suicide Prevention Program in collaboration with ORNL are curating data on social and environmental determinants of health at various geospatial levels
- Set up/extend systems to share this data across agencies and/or publicly
- VHA and ORNL are modeling incremental improvements gained by incorporating community variables with patient level variables for overdose prediction.
- VHA, ORNL and HIDTA are working on combined models of drug availability/use in Veteran populations based on the combination of HIDTA and VA medical record data.
- Need to convene an interagency group to design and implement visualization tools to facilitate use of the curated community data from AHRQ and ORNL.

Rationale/Why is this important for drug strategy or program?

- Currently tools to address risk focus solely on patient factors, not accounting for community impact. Developing models to understand the interplay between patient and community risk can improve health care outreach, and public health response.
- However, this data is complex and tools to support identification of actionable insights are needed, if this data is going to improve drug strategy or program targeting.